ERIE COUNTY

2042 LONG RANGE TRANSPORTATION PLAN

ADOPTED BY THE ERIE MPO

MARCH 15, 2017

ERIE COUNTY 2042 LONG RANGE TRANSPORTATION PLAN

FINAL REPORT

ADOPTED BY THE ERIE MPO ON MARCH 15, 2017

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ERIE COUNTY DEPARTMENT OF PLANNING

THE ERIE AREA TRANSPORTATION STUDY METROPOLITAN PLANNING ORGANIZATION (ERIE MPO)

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Executive Summary

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Executive Summary

Introduction

This Erie County 2042 Long Range Transportation Plan (Erie LRTP) prioritizes transportation investments in Erie County over the next 20+ years and develops a financially-constrained project listing based on anticipated funding levels. The Erie LRTP is a locally-derived, multimodal transportation plan that is updated every five years to confirm the transportation plan's validity and consistency with current and forecasted transportation and land use conditions and trends. The plan must contain at least a 20-year planning horizon.

Federal & State Planning Factors

All LRTPs must address the ten federal planning factors introduced under the Fixing America's Surface Transportation (FAST) Act in 2015. The difference in federal planning factors from the prior LRTP which was under federal guidance for Moving Ahead for Progress in the 21st Century (MAP-21) in 2012 are the refinement of category definitions, and the addition of two new factors: reliability and stormwater, and tourism.

The Erie LRTP addresses the current federal planning factors and aligns with statewide planning policy. The process to develop the LRTP reflects best practices of the **PennDOT Connects** policy, a new planning policy that was introduced and has been evolving over the course of this LRTP update. At time of publication, the Erie MPO is awaiting exact guidelines for implementation. The goal of PennDOT Connects is to maximize the benefits of each project investment for the community and to improve the efficiency of project delivery. This LRTP included extensive public involvement, identification of potential impacts early through meetings with various environmental and resource agencies at the Agency Coordination Meeting, and close collaboration with interested stakeholders and municipalities.

Local Focus

The most important component in creating a locally meaningful and relevant plan that Erie County citizens and officials can support and take ownership of, is to solicit as much input as possible from a diverse array of local stakeholders throughout the development of the plan. To achieve this, the project team conducted an extensive listening tour during the fall of 2016, gathering information regarding concerns and visions for the transportation system from municipal officials, stakeholders, and the public. Five public forums were hosted throughout the county along with a public survey that gathered over 650 responses, a final public meeting was held to review the recommendations of the plan with the public at Blasco Memorial Library. Stakeholder interviews were held to gather input from a wide spectrum of groups, from colleges to economic development groups to immigration and community action groups and trail enthusiasts. The resounding local needs were documented and addressed in the LRTP through projects, policies, and studies.

Federal Planning Factors

1. **Economic Vitality** - support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;
2. **Safety** - increase the safety of the transportation system for motorized and non-motorized users;
3. **Security** - increase the security of the transportation system for motorized and non-motorized users;
4. **Personal and freight mobility** - increase accessibility and mobility of people and freight
5. **Environment** - protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
6. **Mode interconnectivity** - enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
7. **System management** - promote efficient system management and operation; and
8. **System preservation** - emphasize the preservation of the existing transportation system.
9. **Reliability and stormwater** - Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation
10. **Tourism** - Enhance travel and tourism

To illustrate local priorities, the goals and objectives were organized into seven primary themes that are consistent with the required federal and statewide guidance. The LRTP is organized according to the seven local goal areas:

1. Economic Vitality
2. Safety & Security
3. Multimodal Accessibility and Mobility
4. Freight Accessibility and Mobility
5. Sustainability
6. Project Feasibility
7. Congestion and Maintenance

Transportation System Characteristics

The transportation system in Erie County is characterized by two main types of areas: urban and rural. The urbanized area in downtown Erie consists of a robust grid of streets and traffic signals, with arterial roadways such as Route 5, US 20, Route 19 leading to outlying rural communities and town centers. The public survey revealed that residents' primary concerns are for roadway safety, congestion and maintenance of roadways and traffic signals, and a desire for safe and accessible multimodal opportunities for pedestrians and cyclists to access transit, work, and recreation.

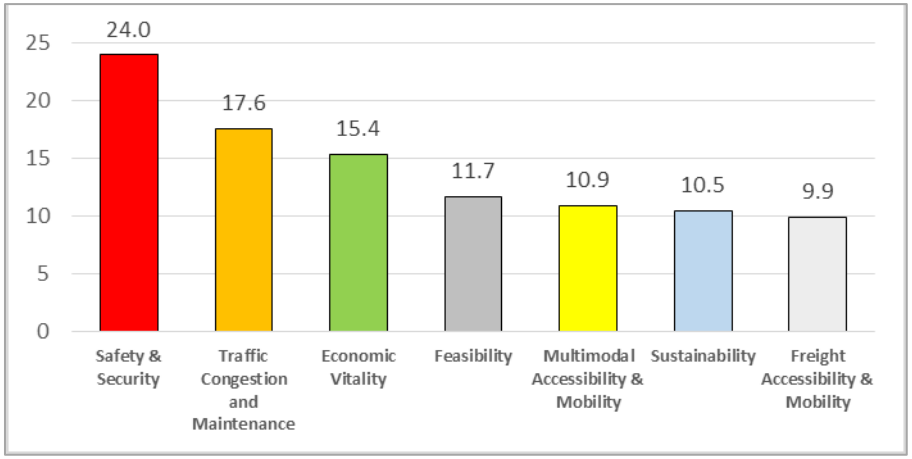
Key draws to the area are parks such as Presque Isle and Erie Bluffs State Park, conventions, shopping, fishing, wineries, recreational trails, and cultural and historical attractions. The multimodal transportation system in Erie consists of highway infrastructure connecting to three interstate routes I-90, I-79, and I-86, trails and sidewalks, fixed transit routes, a working port, two public use airports, and active rail corridors throughout the county. This plan introduces a section covering the linkage between **health** and the built environment; to support this, the Erie Travel Demand Model was enhanced to the fine level of detail needed to predict bicycle and pedestrian travel and develop a new health performance measure following implementable research from the World Health Organization, using the Health and Economic Assessment (HEAT) Tool methodology.

Project Identification and Prioritization

Potential projects for the LRTP were identified through a thorough review of planning documents and local studies and municipal and public outreach. Projects were sorted out and categorized into appropriate categories based on their readiness; detailed descriptions for Highway Projects, Pedestrian and Bicycle Projects, Betterments, Studies, and Local Projects, and policies can be found in Chapter 4.

Project prioritization was accomplished through the Decision Lens tool, which has been utilized by PennDOT and its planning partners to objectively prioritize projects based on their individual merits. As part of the LRTP update process, the local goals of the Erie MPO were re-ranked and weighted. The ranking categories evolved from the 2012 update to reflect federal and local priorities, but the top two categories were still safety and congestion (Exhibit ES-1).

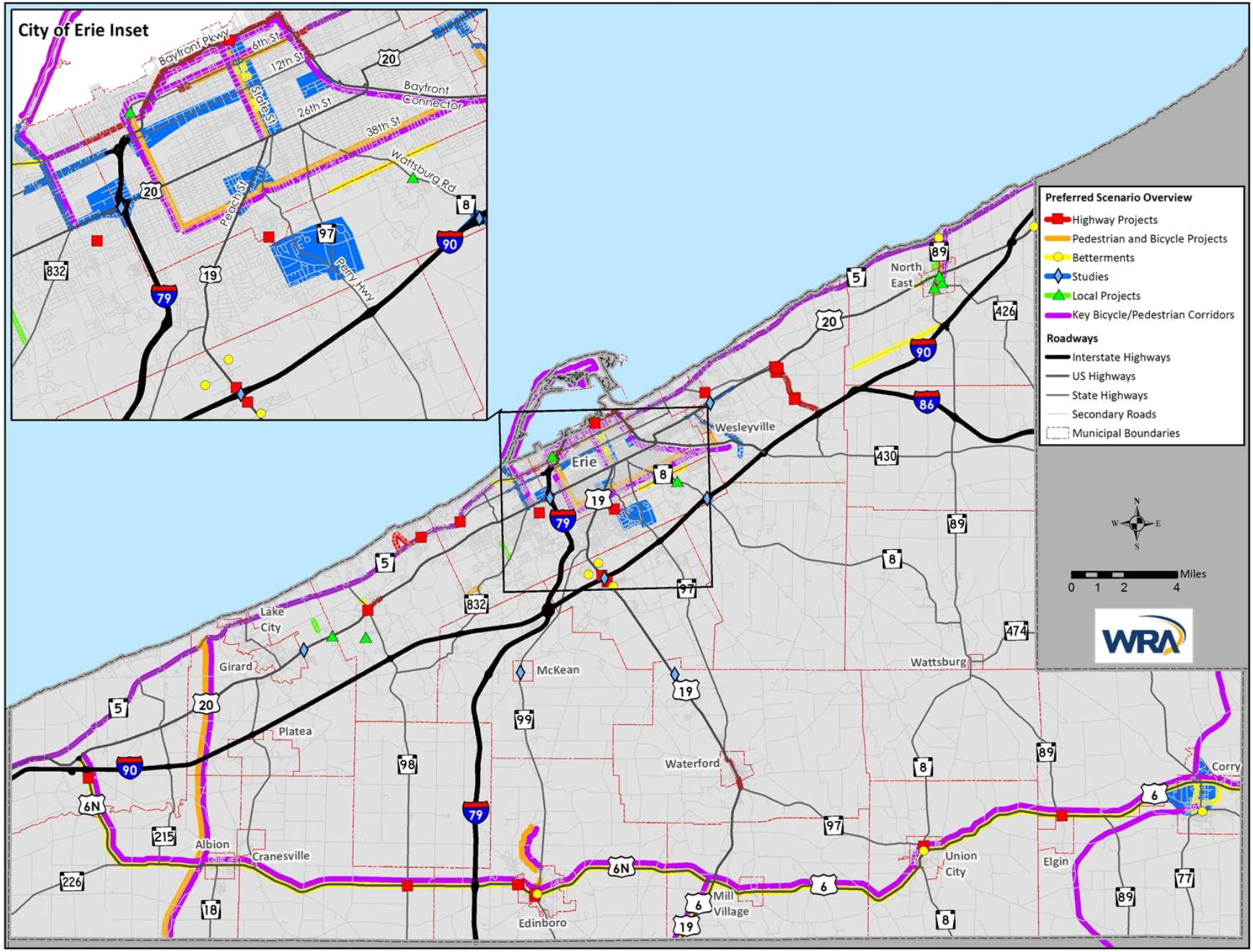
Exhibit ES - 1 – Decision Lens Criteria Weightings



Project Listing

The preferred scenario includes projects that are well-developed and aim to improve accessibility, mobility, safety, congestion, aesthetics, equity, recreational access, health, and tourism. The initial projects that were developed through the LRTP update included Highway Projects, Pedestrian and Bicycle Projects, Betterments, Studies, Local Projects, and Policies (Exhibit ES-2). The LRTP is intended to be a living, breathing document so projects can be added to the listing and reprioritized as needed by the Erie MPO. Other planned projects came from PennDOT, EMTA, and the Bureau of Aviation and Erie International Airport in Appendix D, as the Highway/Other projects, District Bridges, Local Bridge, Transit, and Aviation projects. This listing of projects was not prioritized or funded through the LRTP. Further descriptions of LRTP projects can be found in Chapter 4.

Exhibit ES - 2 – LRTP All Project Location Map



Fiscal Constraint

In an ideal situation, every project could be funded and built. However, the budget for new projects is limited to what's available after maintaining and operating the existing transportation system, which is aging and requiring more resources at the same time that funding revenues are decreasing. This requires the LRTP project listing be constrained to what is assumed to be available over the life of the plan (Exhibit ES-3). Funding was assumed to remain flat from 2020 onward. Cost estimates were prepared for each project by phase such as preliminary engineering, final design, right-of-way, utilities, and construction. The projects were programmed by phases in order of Decision Lens ranking and available funding source in Appendix E of this plan.

Exhibit ES - 3 – Funding Assumptions by Category ($/Year)

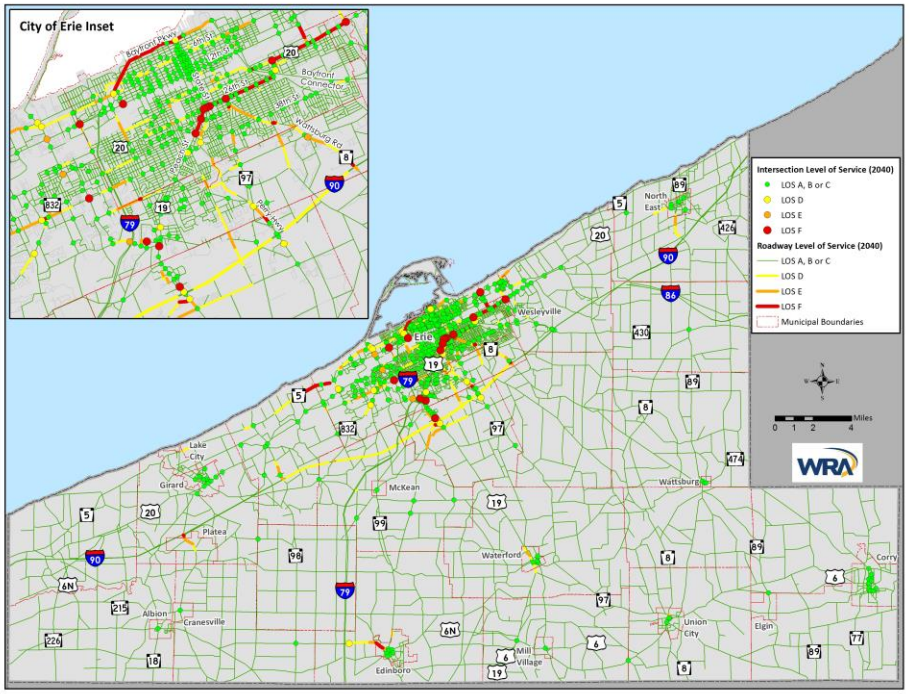
		NHPP	STBG	HSIP	CMAQ	185	581	BOF
Current	2017	330,200	311,200	1,316,800	1,400,800	200,000	160,350	800,000
	2018	341,100	316,200	1,350,400	1,435,200	200,000	164,325	800,000
	2019	353,200	320,100	1,384,000	1,468,800	200,000	168,325	800,000
	2020	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
	2021	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
	2022	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
Mid-Range	2023	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
	2024	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
	2025	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
	2026	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
	2027	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
	2028	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
Long-Range	2029	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
	2030	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
	2031	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
	2032	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
	2033	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
	2034	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
	2035	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
	2036	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
	2037	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
	2038	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
	2039	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
	2040	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
	2041	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
	2042	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000

Performance Based Planning

Federal legislation encourages performance based planning. Performance based planning is a strategic approach that uses data to support decisions that will help to achieve the desired outcomes and goals of the community.

The Erie LRTP offers performance measures to gauge the effectiveness of each scenario or project in meeting the county's goals and objectives. The current and future no build scenarios were analyzed through the Erie TDM and reported based on future congestion predicted due to current population and employment forecasts (Exhibit ES-4). The suite of recommended LRTP projects was analyzed through the TDM and prepared in Appendix C.

Exhibit ES - 4 – Future Baseline Congestion



Measuring Progress

The project team developed a practical Report Card as a means for the Erie MPO to track performance of transportation investments over time, trending towards achieving local goals and objectives. The report card was created to utilize readily available data to be as practical as possible; the frequency of each item check aligns with the frequency of data updates, most are every 2-year TIP update cycle. The Report Card checks measures such as safety, pavement quality, bridges, and mode share, among others (Appendix G).

Chapter 1
Introduction

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Overview

The Erie Area Transportation Study Metropolitan Planning Organization (EATS MPO) consists of representatives from municipalities throughout Erie County and is responsible for planning and coordinating Erie County's transportation investments. The key plan that supports this effort is the **Erie County Long Range Transportation Plan** (**LRTP**). The LRTP prioritizes transportation investments in the region over the next 20+ years and develops a financially-constrained project listing based on anticipated funding levels. The Erie LRTP is updated every five years in attainment areas to confirm the transportation plan's validity and consistency with current and forecasted transportation and land use conditions and trends and to extend the forecast period to at least a 20-year planning horizon.

The LRTP is paramount to helping achieve Erie County's vision for the future while ensuring that we grow and invest in transportation in a manner that complements federal and state planning direction. The current national and state transportation funding situation is bleak and the competition for discretionary funding is stiff, requiring the Erie LRTP to be lean, and focus on implementable projects to make the best use of available transportation funding.

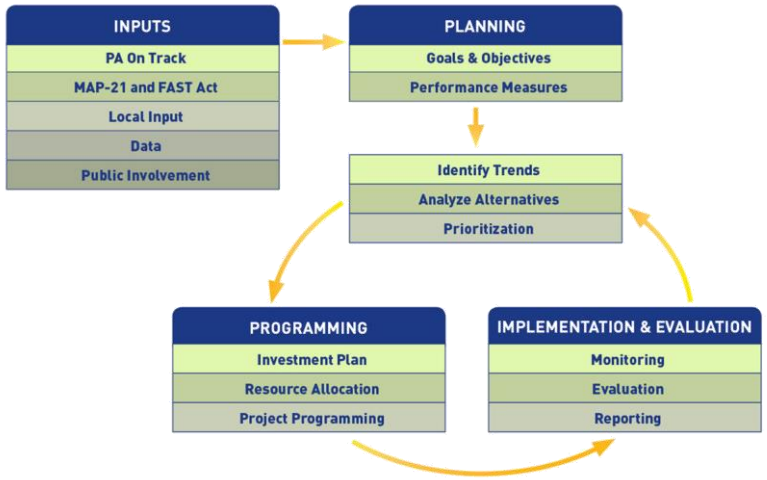
With strategic investments in our current transportation system, Erie County can improve the vitality, safety, and security of the region while providing transportation choices, encouraging sustainability, and focusing on system efficiency and preservation.

Performance Based Planning

Federal legislation encourages performance based planning (Exhibit 1). Performance based planning is a strategic approach that uses data to support decisions that will help to achieve desired outcomes. In other words, performance measures are used to ensure that the planning process is achieving local goals. PennDOT reinforces this planning approach through early collaboration and involvement between federal, state, local officials and the public as part of PennDOT Connects, discussed later in this chapter.

For example, the planning approach would progress a transportation project from concept to construction like this: a municipality or member of the public reports an unsafe intersection during a public outreach meeting following PennDOT Connects policy, the intersection location is referenced against crash data and field views to determine if there is a problem that could be addressed through safety treatments, safety treatments would be identified that align with current standards; a planning-level project scope and cost estimate is developed for improvements; the project is ranked against other projects throughout the county through objective measures; the project is programmed in order of regional priority; when funding becomes available, the project scope is reviewed through PennDOT Connects policy and cost estimates updated before funding is allocated; the project is let for competitive bid for design and/or construction; then the project is awarded, designed, and built. To ensure that the constructed project has achieved its intended purpose, it would be evaluated with an after-study to see if it had the intended consequence of improving safety. The performance measure could be a reduction in frequency or severity of crashes at the intersection after safety treatments. Following a performance based planning process helps to keep the region focused on its goals through the outcomes of many individual projects and encourages successful project delivery.

Exhibit 1 – Performance Based Planning Flowchart



Performance based planning is a strategic approach that uses data to support decisions that will help to achieve desired outcomes. In other words, performance measures are used to ensure that the planning process is achieving local goals.

Federal Planning Factors

The Erie County LRTP addresses federal and state planning criteria set forth by the Federal Highway Administration (FHWA) and PennDOT. On December 4th, 2015, President Obama signed the Fixing America's Surface Transportation Act (FAST Act), which outlines the 10 federal planning factors that should be addressed by all LRTP's through projects, plans, or policies. The federal planning factors are described below:

1. **Economic Vitality** - support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;
2. **Safety** - increase the safety of the transportation system for motorized and non-motorized users;
3. **Security** - increase the security of the transportation system for motorized and non-motorized users;
4. **Personal and freight mobility** - increase accessibility and mobility of people and freight
5. **Environment** - protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
6. **Mode interconnectivity** - enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
7. **System management** - promote efficient system management and operation; and
8. **System preservation** - emphasize the preservation of the existing transportation system.
9. **Reliability and stormwater** - Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation
10. **Tourism** - Enhance travel and tourism

State Planning Factors

PennDOT released *PA On Track,* Pennsylvania's Long Range Transportation Plan in December 2015. This plan analyzed the current state and future of Pennsylvania's various transportation systems. The plan's strategic direction translated the federal planning factors to four primary Pennsylvania-specific focus areas: system preservation, safety, personal and freight mobility, and stewardship while also identifying a set of performance measures that will be used to track the state's success in meeting its transportation goals (Exhibit 2).

Exhibit 2 – Federal and State Planning Factors

FAST Act	PA On Track Goal Areas	PA On Track Performance Measures
System preservation	System Preservation	% pavements in good and poor condition, pavement structure index, percent of structurally deficient and load-restricted bridges, average age of bus fleet
System management		
Safety	Safety	Total number of fatalities and serious injuries, rate of crashes with fatalities and serious injuries per vehicle miles traveled, number of fatalities and serious injuries in work zones, at rail crossings, and roadway-related bicycle and pedestrian fatalities or serious injuries
Security		
Personal and freight mobility	Personal and freight mobility	Annual hours of truck/auto delays and cost, annual transit ridership for fixed route and shared ride services, percent/number of freight bottlenecks eliminated
Mode interconnectivity		
Economic Vitality	Stewardship	Annual savings through Next Generation implementation, timely delivery of approved local projects, timely delivery of highway occupancy permits, number of municipal officials trained through Local Technical Assistance Program on coordination of transportation and land use planning
Environment		
Reliability and stormwater		
Tourism		

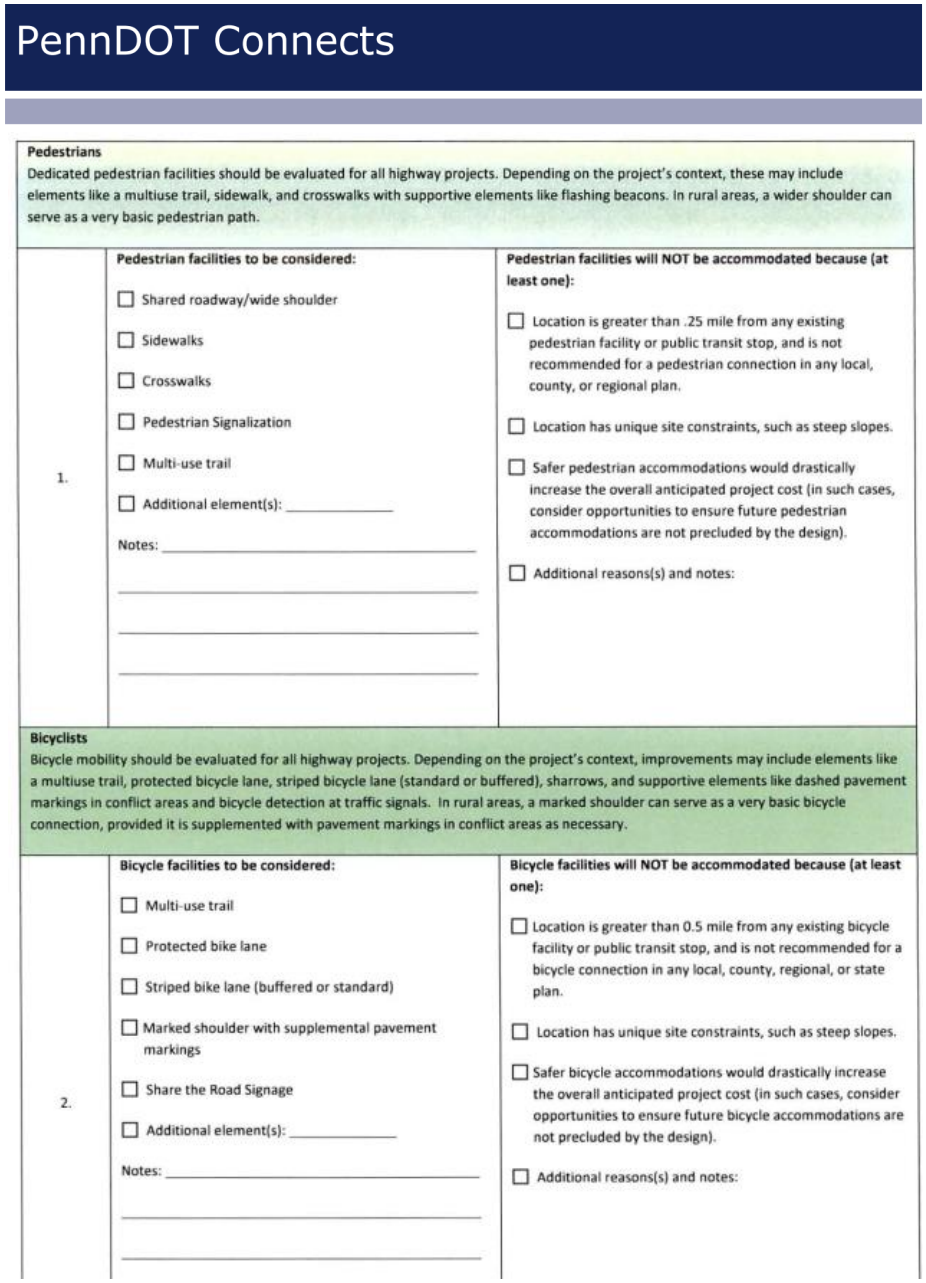
PennDOT Connects

PennDOT Connects is a new planning policy introduced by PennDOT that has been evolving over the course of this LRTP update. The goals of PennDOT Connects are to maximize the benefits of each project investment for the community and to improve the efficiency of project delivery. Secretary of Transportation Leslie Richards acknowledges that a common issue in many PennDOT projects is a lack of thorough collaboration with the community during project planning, leading to missing crucial elements during scoping which results in project delays and higher costs when they are discovered. Early collaboration and community input is the key to addressing this issue.

This policy will require local government collaboration meetings to occur before new projects are added to future Transportation Improvement Program (TIP) updates, and are strongly encouraged for projects added to LRTP updates. If local collaboration under this policy does not occur during the collaboration process prior to TIP or LRTP updates, the meeting must be conducted prior to adding a new project during the TIP update.

The objective is to fully consider community features for future projects in planning before projects are programmed. Specific areas to be discussed during collaboration include, but are not limited to: safety issues; bicycle/pedestrian accommodations; transit access; stormwater management; utility issues; local and regional plans and studies; freight-generating land uses and more. This will enhance local engagement and improve transportation project planning, design, and delivery.

PennDOT Connects requirements to meet with local governments, Metropolitan Planning Organizations (MPO) and Rural Planning Organizations (RPO) are being implemented on new projects on the state's 2017-2020 TIP. PennDOT is currently working on developing exact processes and implementation guidelines. An example of the interim project development / planning questionnaire can be found on the right.



PennDOT Connects

Pedestrians

Dedicated pedestrian facilities should be evaluated for all highway projects. Depending on the project's context, these may include elements like a multiuse trail, sidewalk, and crosswalks with supportive elements like flashing beacons. In rural areas, a wider shoulder can serve as a very basic pedestrian path.

1.

Pedestrian facilities to be considered:

- ☐ Shared roadway/wide shoulder
- ☐ Sidewalks
- ☐ Crosswalks
- ☐ Pedestrian Signalization
- ☐ Multi-use trail
- ☐ Additional element(s): _____

Notes: _____

Pedestrian facilities will NOT be accommodated because (at least one):

- ☐ Location is greater than .25 mile from any existing pedestrian facility or public transit stop, and is not recommended for a pedestrian connection in any local, county, or regional plan.
- ☐ Location has unique site constraints, such as steep slopes.
- ☐ Safer pedestrian accommodations would drastically increase the overall anticipated project cost (in such cases, consider opportunities to ensure future pedestrian accommodations are not precluded by the design).
- ☐ Additional reasons(s) and notes:

Bicyclists

Bicycle mobility should be evaluated for all highway projects. Depending on the project's context, improvements may include elements like a multiuse trail, protected bicycle lane, striped bicycle lane (standard or buffered), sharrows, and supportive elements like dashed pavement markings in conflict areas and bicycle detection at traffic signals. In rural areas, a marked shoulder can serve as a very basic bicycle connection, provided it is supplemented with pavement markings in conflict areas as necessary.

2.

Bicycle facilities to be considered:

- ☐ Multi-use trail
- ☐ Protected bike lane
- ☐ Striped bike lane (buffered or standard)
- ☐ Marked shoulder with supplemental pavement markings
- ☐ Share the Road Signage
- ☐ Additional element(s): _____

Notes: _____

Bicycle facilities will NOT be accommodated because (at least one):

- ☐ Location is greater than 0.5 mile from any existing bicycle facility or public transit stop, and is not recommended for a bicycle connection in any local, county, regional, or state plan.
- ☐ Location has unique site constraints, such as steep slopes.
- ☐ Safer bicycle accommodations would drastically increase the overall anticipated project cost (in such cases, consider opportunities to ensure future bicycle accommodations are not precluded by the design).
- ☐ Additional reasons(s) and notes:

Local Emphasis

Listening Tour

The most important component in creating a locally meaningful and relevant plan that Erie County citizens and officials can support and take ownership of, is to solicit as much input as possible from a diverse array of local stakeholders and use it to develop the plan. This approach is directly in line with PennDOT Connects policy. To achieve this goal, the project team conducted an extensive listening tour during the fall of 2016, gathering information regarding transportation-related concerns and visions for the transportation system in Erie County from municipal officials, stakeholders, and the public. The results of the outreach are discussed further in Chapter 2. This outreach effort allowed the plan to put a local, Erie-centered emphasis on the federal and statewide guidance and determine how targeted transportation investments can help Erie meet its goals. Further outreach for studies and projects resulting as part of this LRTP should follow the required PennDOT Connects process for engagement and early collaboration.

Municipal Officials & Public Outreach

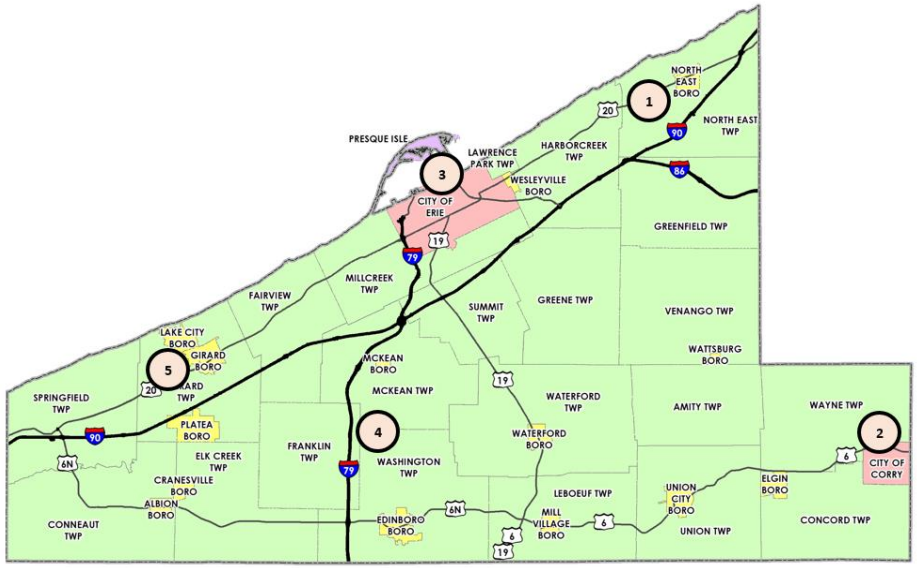
Municipalities and the public in Erie County were invited to participate in a series of five open house style meetings held throughout the county during the first week of November 2016 (Exhibit 3):

1. **Northeast** – North East Township Building
2. **Southeast** – Corry Community Center
3. **Downtown Erie** – Erie City Council Chambers
4. **South Central** – Washington Township Building
5. **Northwest** – Girard Township Building

The project team prepared with a set of prompting questions to discuss a variety of transportation related topics with municipal officials and the public, as well as blank maps for participants to denote their ideas and areas of concern. Between meetings, the project team performed field views to visit and photograph areas of concern discussed by members of the public to better understand the problem areas and potential projects to solve them.

Every meeting was advertised to be open to any municipality and any member of the public, regardless of their home municipality. They were held during the AM and PM peak hours to help offer flexibility for the public to attend.

Exhibit 3 – Erie County Listening Tour Locations



Transportation Survey

In addition to the open house format public meetings, the public was also invited to participate in a transportation survey as another avenue to help guide the plan. The online survey was live for a full month in October 2016 and was advertised in the Erie Times News, local news stations, on tent cards at public libraries, flyers at college campuses, the Erie County Planning website, social media, and through changeable message signs from PennDOT District 1-0. A paper version of the transportation survey was made available at the Erie County Planning Offices on the Bayfront. Translation services are offered for all MPO-related material upon request.

The survey received 678 responses from residents representing 36 of the 38 municipalities in the county. The survey gathered information such as the resident's municipality, their rating of the importance and condition of available infrastructure, up to three specific areas of transportation concern, and information about walking, bicycling, transit, recreational and local tourism behavior. Respondents voluntarily provided contact information for further follow-up and invitation to upcoming public meetings.

Stakeholder Involvement

Stakeholders were engaged by means of targeted interviews due to their expertise in specific components of transportation and related areas. Interviews were conducted via phone and in-person when possible. Stakeholders interviewed include:

- Erie LEAD Team consisting of representatives from:
  - Erie Regional Chamber and Growth Partnership
  - Pennsylvania Department of Community and Economic Development
  - Northwest Commission
  - Innovation Collaborative
  - Corry Area Redevelopment Authority
  - Erie Technology Incubator
  - Radius Cowork
  - Ben Franklin Technology Partners
- Colleges
  - Mercyhurst University
  - Penn State University Behrend Campus
  - Edinboro University
  - Gannon University
- Visit Erie – Tourism Bureau
- BikeErie and local shop owners
- Regional Airport Authority
- PennDOT Bureau of Aviation (BOA)
- Port of Erie
- Erie Metropolitan Transit Authority
- PennDOT District 1-0 Bridge Engineer
- International Institute of Erie for the US Committee for Refugees and Immigrants
- Erie County Emergency Management Agency
- Erie Department of Public Health

Erie County Goals & Objectives

The goals and objectives of the LRTP are organized based on seven major categories of resounding local needs, and expanded to align with the federal and state planning factors. The main goals of the LRTP are focused around improving the quality of life and economic vitality of Erie County. They prioritize maintaining and improving the condition of existing infrastructure and investing in targeted multimodal improvements to enhance safety and accessibility. A set of measurable objectives are laid out following each goal to help Erie County achieve its vision for the future.

1 - Economic Vitality

Goal - Ensure that transportation investments support the economic vitality of Erie County and enable regional and global competitiveness, productivity, and efficiency, as well as enhance reasons to consider Erie County for businesses and travelers.

Objectives:

- Improve access to targeted investment areas and planned development to support job growth, freight access, and employee retention
- Improve access to the interstate
- Support revitalization efforts
- Improve access to tourist attractions
- Enhance recreational opportunities for residents and visitors

2 - Safety & Security

Goal - Increase the safety and security of the transportation system for all users.

Objectives:

- Reduce the number of motorized and non-motorized crashes
- Reduce hazard potential in school zones, at highway-rail crossings, and other sensitive locations
- Improve safety, reliability, and accessibility along emergency detour routes
- Improve emergency response time

3 - Multimodal Accessibility and Mobility

Goal - Improve the integration and connectivity of the transportation system across modes to increase accessibility and mobility options for people.

Objectives:

- Improve walking and bicycling accessibility
- Improve public transportation and ride-share accessibility

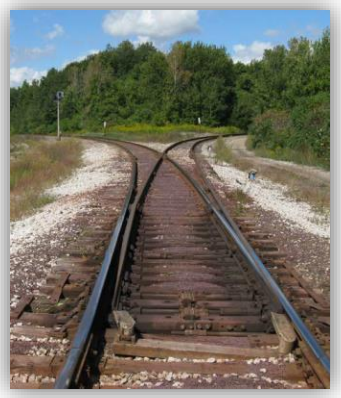
Source: PennDOT D1 Report Card

4 - Freight Accessibility and Mobility

Goal - Improve the integration and connectivity of the transportation system across modes to increase accessibility and mobility options for freight.

Objectives:

- Improve passenger and freight services for air, rail, waterborne transportation



5 - Sustainability

Goal - Ensure that transportation investments protect and enhance the environment and ensure equitable access.

Objectives:

- Reduce impacts to environmental, natural, and cultural resources
- Improve quality of life and accessibility to jobs and resources for underserved populations

6 - Project Feasibility

Goal - Streamline project implementation and improve project delivery.

Objectives:

- Support locally derived land use and transportation planning projects
- Improve the linkage between municipal plans, planning studies, and project development
- Ensure that right-of-way, utility, and railroad coordination are conducted early in the planning process

7 - Congestion and Maintenance

Goal - Ensure efficient system management and operations that emphasize preservation of the existing transportation system.

Objectives:

- Improve and maintain pavement quality
- Reduce the number of structurally deficient bridges, and maintain existing structures to prevent deficiency
- Improve traffic signal system operations
- Improve level of service on congested corridors and intersections
- Improve stormwater infrastructure and roadway drainage

Source: USFWS Wetlands of Pennsylvania's Lake Erie Watershed

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Chapter 2
Transportation System & Needs

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Transportation System & Needs

A key element of a long range transportation plan is an inventory of the **transportation system** and investigation of the **transportation needs** of the area's residents and visitors. The following chapters are organized by the seven local goal areas discussed in Chapter 1 and explain how Erie's transportation system fares in response to those goals. The goal areas are:

1. Economic Vitality
2. Safety & Security
3. Multimodal Accessibility & Mobility
4. Freight Accessibility & Mobility
5. Sustainability
6. Project Feasibility
7. Congestion and Maintenance

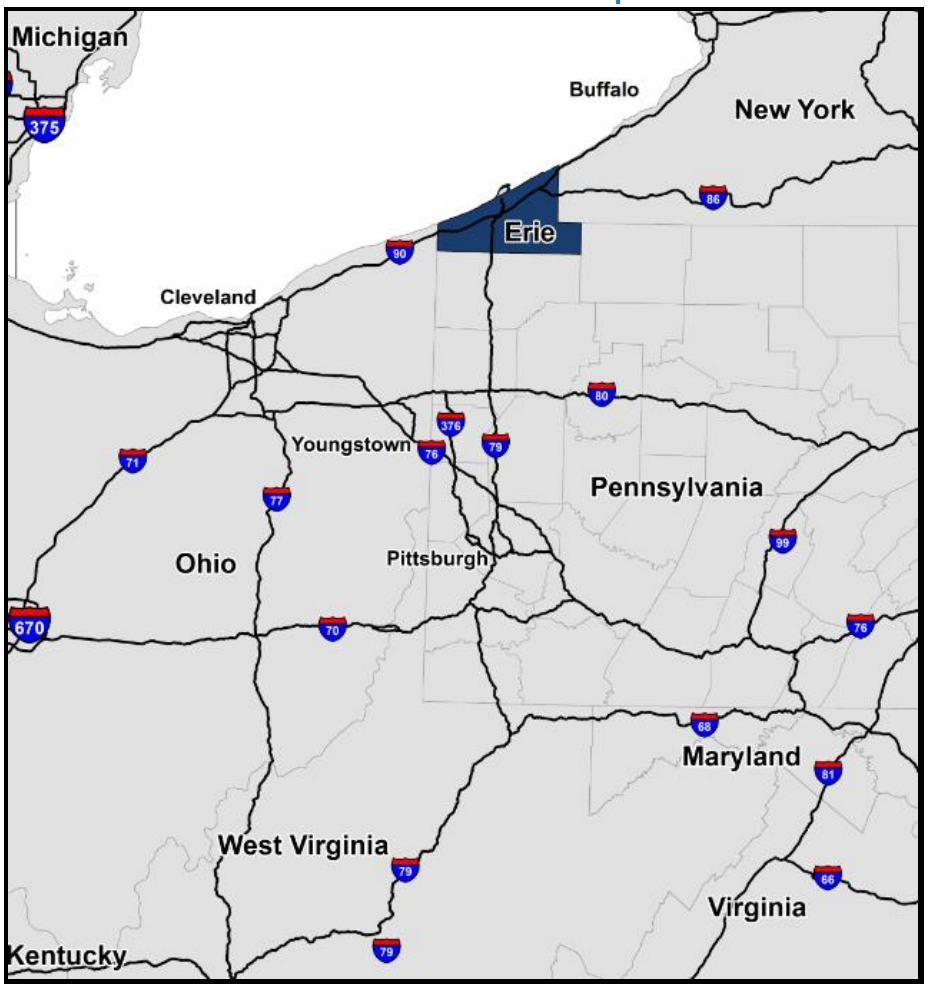
1 - Economic Vitality

The economic vitality of Erie is tied to numerous factors, which include its geographic location, population, employment, land use, and tourism generators. PennDOT Connects policy recognizes the transportation system's influence on economic vitality. The project team held discussions with the Erie LEAD Team, a team of multi-disciplinary entrepreneurs and community leaders who represent major businesses and economic development corporations to better understand the current state of these key economic drivers in Erie County.

Location

Erie County is located in northwestern Pennsylvania, bordering Lake Erie (Exhibit 4). During the Industrial Revolution in the mid-19th century, Erie was a critical point on 3 major national rail lines and much industrial and residential development occurred in the walkable vicinity of the rail lines. Erie is within two hour's drive from major markets in Pittsburgh, Buffalo, and Cleveland along the interstates. Erie has been gaining visibility in recent years as a regional tourist destination by leveraging its natural resources to provide recreational opportunities for visitors and residents alike.

Exhibit 4 – Location Map



Population

From 1950 through 1980, Erie County's population increased at a greater rate than the state average. However, as in much of Western Pennsylvania, changes in the region's economy due to the declining steel industry contributed to a dramatic shift in the county's growth rate. Since 1980, population growth in the county as a whole has been relatively stable and lower than the overall population growth in Pennsylvania and nationwide (Exhibit 5).

In addition to the City of Erie and surrounding townships population centers are included in the population density map showing local population centers in the rural municipalities, among these communities is North East, Wattsburg, Corry, Union City, Mill Village, Waterford, Edinboro, Albion, Girard, Lake City, Fairview, and Harborcreek (Exhibit 6).

Exhibit 5 – Erie County Population Trends

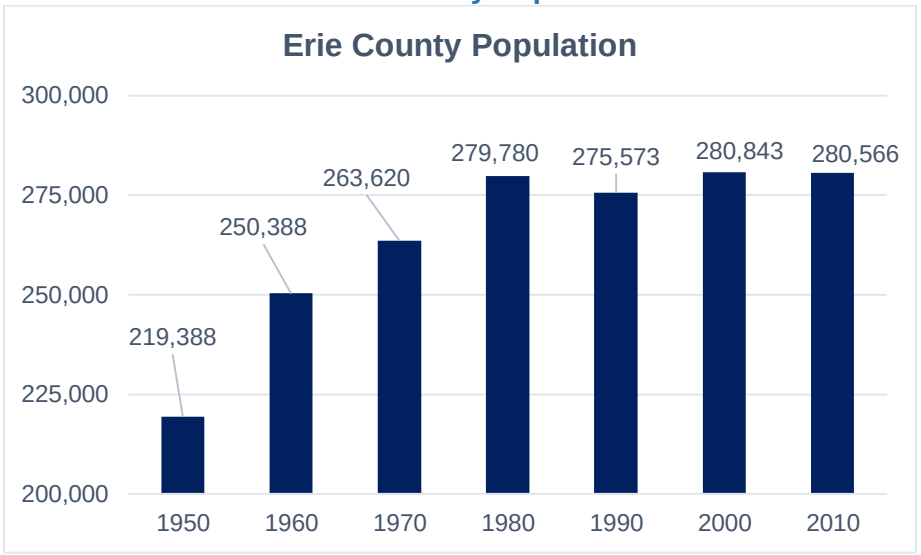
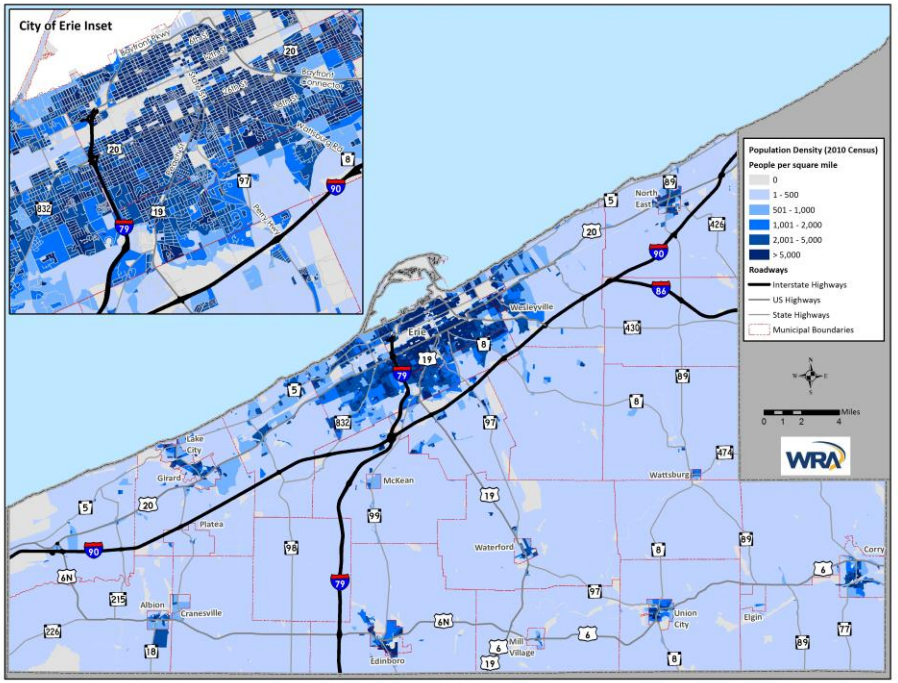


Exhibit 6 – Population Density



Understanding where **population growth** is likely to occur is a key step to identifying the future transportation needs of Erie County (Exhibit 7). Future population forecasts were based on what is commonly referred to as the cohort survival method which tracks projected births, deaths, in-migration, and out migration. These forecasts were also compared to forecasts from Woods and Poole Economics forecasts which provide a reasonable benchmark for comparison. Based on the comparison of various assumptions on birth, survival, and migration rates, it is clear that the key to growth in Erie County is to maintain a strong economy that will sustain and increase employment opportunities in order to maintain and attract new residents.

More substantial population growth is predicted to occur in Summit Township and Millcreek Township, with some mild growth in downtown Erie, and a mild decrease in population in some of the outlying communities due to its aging population.

Employment

The three primary sources of data for developing **employment forecasts** are: the Pennsylvania Department of Labor and Industry, the Erie Chamber and Growth Partnership, and the United States Department of Labor and Bureau of Labor Statistics. Similarly to the population forecasts, Woods and Poole data was obtained for a benchmark for comparison. Employment projections are divided into two general categories: Goods Producing and Services-Providing.

Goods Producing: General Electric is the premier producer of locomotives in the world, and the company's primary plant is located in Erie County. The company provides over 3,000 jobs locally. Other prominent manufacturers are discussed in the Freight chapter of this section.

Services Providing: Erie County is well positioned in the projected growth sectors of healthcare and education with four institutes of higher learning, five major medical facilities, and the Lake Erie College of Osteopathic Medicine (LECOM) The county is also poised to remain strong in the tourist industry with area attractions receiving over 11 million visitors annually. Overall, it is anticipated that employment in Erie County will be relatively stable between 2010 and 2040. The largest projected growth is in the Healthcare sector with a 3% increase over the life of the plan. The second largest sector, manufacturing, is anticipated to have a 2% increase in employment (Exhibit 8).

Exhibit 7 – Population Forecasts

Municipality	2010	2040	Change
Albion	1,516	1,469	-3%
Amity	1,073	1,108	3%
Concord	1,344	1,335	-1%
Conneaut	4,290	4,508	5%
Corry	6,605	6,521	-1%
Cranesville	638	617	-3%
Edinboro	6,438	6,667	4%
Elgin	218	214	-2%
Elk Creek	1,798	1,848	3%
City of Erie	101,786	103,860	2%
Fairview	10,102	10,935	8%
Franklin	1,633	1,746	7%
Girard Borough	3,104	3,132	1%
Girard Township	5,102	5,237	3%
Greene	4,706	4,841	3%
Greenfield	1,933	1,967	2%
Harborcreek	17,234	18,662	8%
Lake City	3,031	3,183	5%
Lawrence Park	3,982	3,850	-3%
LeBoeuf	1,698	1,713	1%
McKean Borough	388	359	-7%
McKean Township	4,409	4,659	6%
Mill Village	412	400	-3%
Millcreek	53,515	56,782	6%
North East Borough	4,294	4,214	-2%
North East Township	6,315	6,643	5%
Platea	430	411	-4%
Springfield	3,425	3,498	2%
Summit	6,603	7,213	9%
Union	1,655	1,674	1%
Union City	3,320	3,106	-6%
Venango	2,297	2,233	-3%
Washington	4,432	4,852	9%
Waterford Borough	1,517	1,468	-3%
Waterford Township	3,920	3,958	1%
Wattsburg	403	385	-4%
Wayne	1,659	1,592	-4%
Wesleyville	3,341	3,204	-4%

Exhibit 8 – Employment Forecasts

NAICS Sector	2020	2040	Change
Construction	4,014	3,927	-2%
Manufacturing	21,000	21,500	2%
Retail	15,000	14,000	-7%
Finance & Insurance	5,200	5,350	3%
Administration	6,802	6,654	-2%
Education	12,100	12,600	4%
Health Care	26,900	27,800	3%
Accomodations & Food Services	11,814	11,558	-2%
Other Services	6,011	5,881	-2%
Government	7,405	7,244	-2%
Self Employed	8,882	8,689	-2%
All Others	19,872	17,282	-13%
Totals	145,000	142,500	-2%

Land Use

The Erie MPO represents 38 municipalities in Erie County. There are distinct differences in land use patterns between the City of Erie and municipalities in the county.

Land use ordinances are important in guiding Erie to develop in a way that benefits everyone, from employers, residents, and institutions. Particularly, land use plans can ensure that industry can grow in an appropriate area, that residential property values are preserved and not negatively impacted by nearby land uses, and vacant or blighted properties can be repurposed in meaningful ways to the community. More thorough discussion on land use, housing stock, and implications can be found in other planning studies such as the *Erie Refocused: Comprehensive Plan and Community Decision-Making Guide* completed in 2016. Current land use/land cover (Exhibit 9) shows the pockets of urbanized core, agricultural land use, as well as industrial and residential development clustered around interstate access and rail amenities. Future land use plans show targeted growth areas, as well as land reserved for conservation, open space in flood plains, and recreation (Exhibit 10). Future development will depend heavily on the expansion of the public water and sewer systems.

Exhibit 9 – Current Land Cover

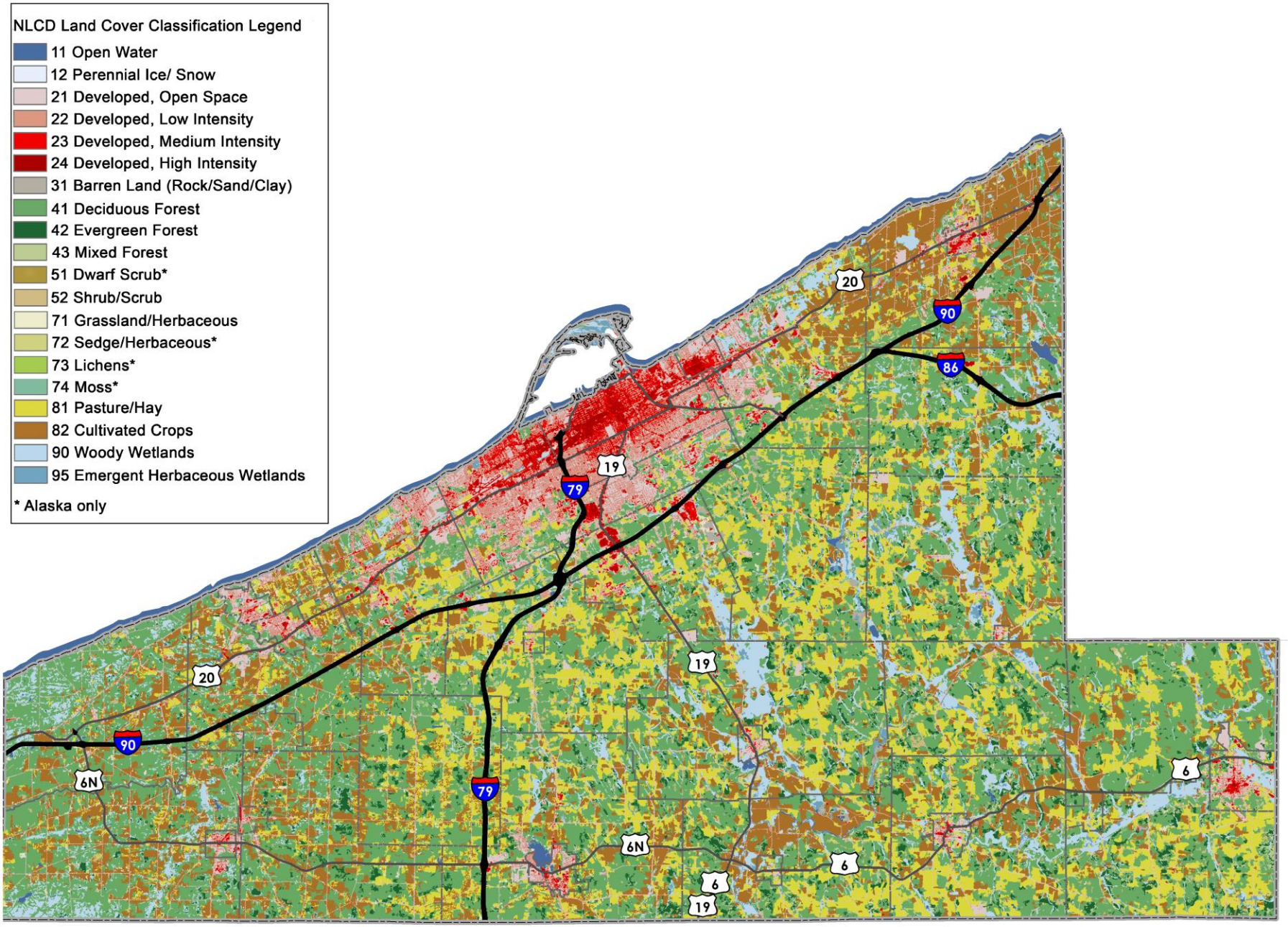
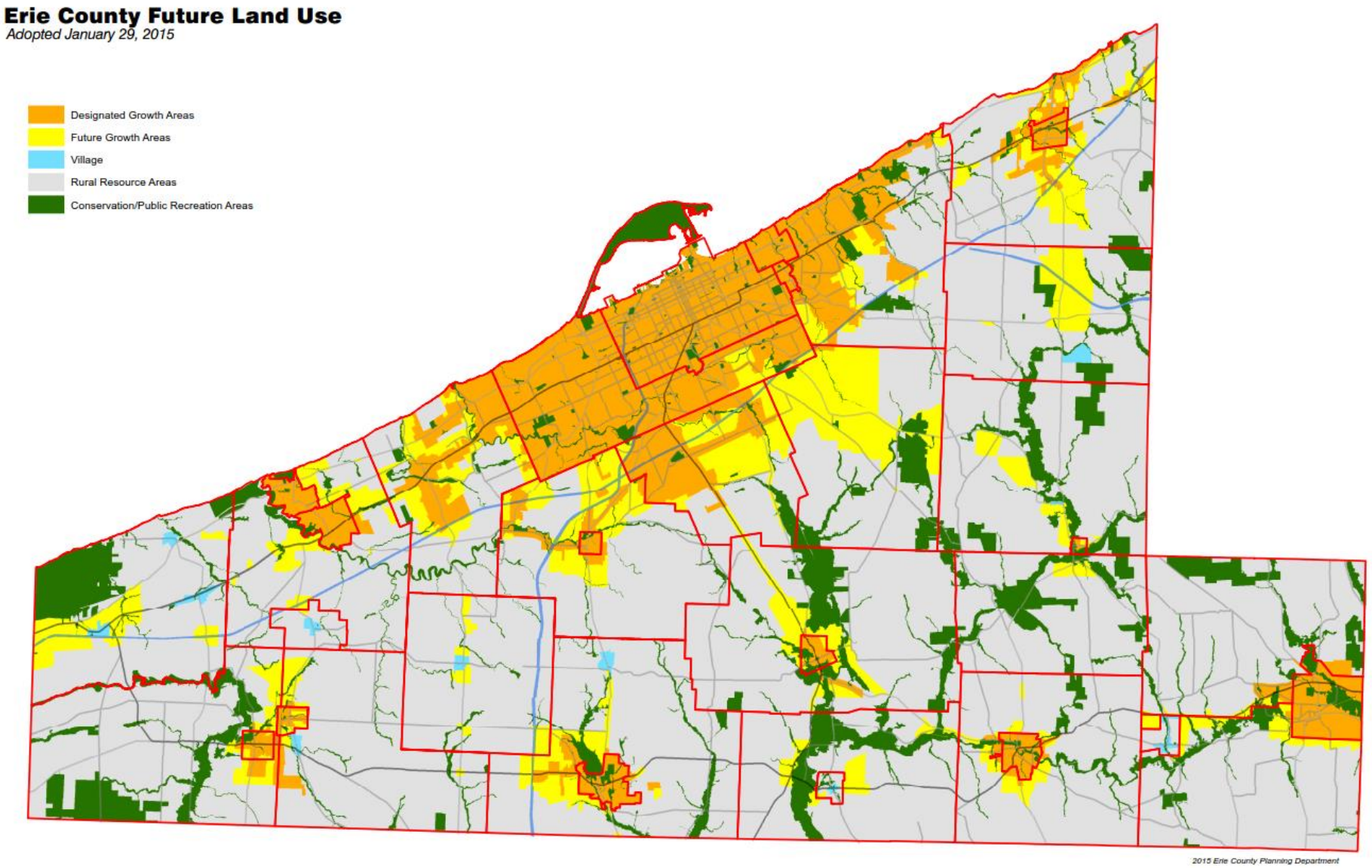


Exhibit 10 – Future Land Use



Tourism

Tourism is a key economic driver in Erie County due to its natural resources and recreational focus, retail opportunities, convention capacity, and family-friendly attractions. These resources are of utmost importance to the quality of life in Erie and its residents want to protect and enhance existing resources for use by residents and visitors alike.

Erie's natural resources play a vital role in its economy. Erie is home to high quality wild reproduction and stocked trout streams and attracts anglers for its world-class **steelhead fishing**, with an economic impact estimated at $5.71 million value-added annually by a 2004 study by PFBC. A drive down any route near a stream in peak steelhead season with vehicles parked on either side of the roadway is proof enough that anglers are coming in droves, spending money on lodging and restaurants and shopping during their trip; public access to these streams is limited as private property backs up to much of the prime access points. Public access points are not always clearly defined to the passerby which may prove a challenge for less-savvy visitors. Maps are available online through PFBC. A balance must be struck between access to fishing and the quality of the fisheries; coordination between Erie County Planning, the Pennsylvania Fish and Boat Commission, and PennDOT should be conducted early during any roadway or bridge projects near streams to examine the potential for easements for public access to fishing. **French Creek** in the south central portion of the county is a high quality water trail with excellent boating and fishing opportunities.

Erie is also home to two **state parks** – Presque Isle and Erie Bluffs State Park. Every year, nearly 4 million visitors flock to Presque Isle for its sand beaches, scenic trails, and pavilions as well as pier fishing and bird-watching opportunities. Erie Bluffs State Park contains miles of trails and scenic vistas of the lake and is connected to the regional **Seaway Trail**. Other popular local parks include Asbury Woods in Millcreek Township and Wintergreen Gorge in Harborcreek Township. Bicycle trails abound in the southeastern portion of the county with the Corry Junction Trail in the City of Corry and Bicycle Routes Y and Z, as well as several ongoing studies that identified US 6 and 6 N as excellent candidates for bicycle lanes. The Erie LEAD team stated a desire to develop bicycle routes to provide mobility and tourism options for residents, students, and visitors, and a reason to spend a weekend in Erie.

Erie's unique microclimate on the lake makes conditions particularly great for grape growing. The vineyards in late September permeate the air with an irresistible grape scent. Erie has over a dozen vineyards operating as part of **Lake Erie Wine Country**. Erie is becoming increasingly known as a winery destination and hosts WineFest every fall in North East attracting crowds upwards of 20,000 people from Pennsylvania, Ohio, New York, and Canada.

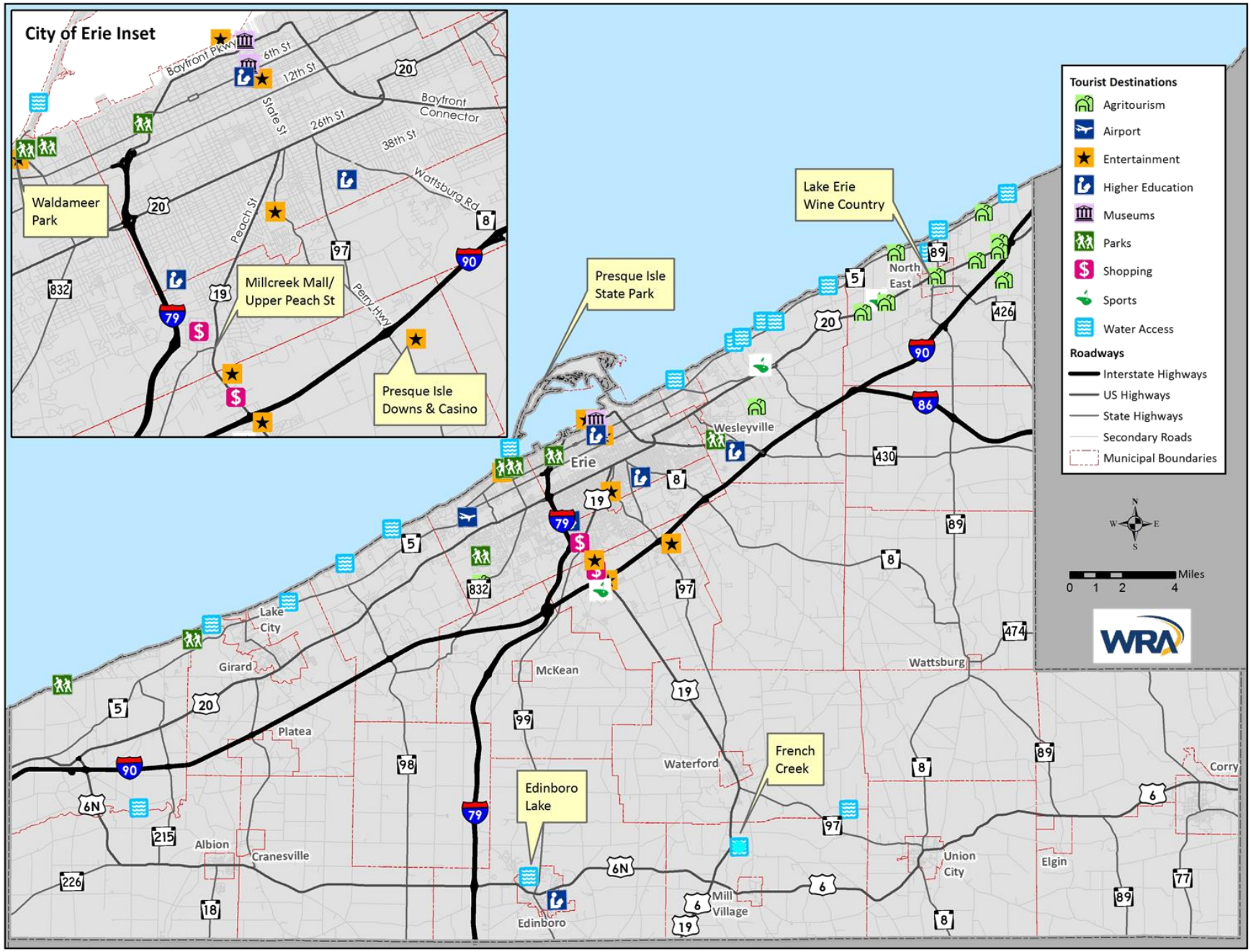
Another important component of Erie's economy is **retail tourism**. It is not uncommon to see buses arrive from Canada, Ohio, and New York at the Millcreek Mall and Upper Peach Street, where brand name retailers abound. A resounding need heard during the listening tour was for improved walkability between shopping plazas for residents and visitors. Residents of Erie who utilize public transit to get to jobs in the Millcreek Mall area do not have dedicated sidewalks to complete the last leg of their journey to work safely.

Erie frequently plays host to large functions and conventions at the **Bayfront Convention Center** and along the Bayfront, such as the Tall Ships Festival and Roar on the Shore. There are currently discussions surrounding the future of the Bayfront to be a more mixed-use, multimodal corridor that bridges the gap between the Bayfront and Downtown and brings economic growth and revitalization to both. This is an important local focus. Southeast of the mall complex, one interchange away on I-90 is **Presque Isle Downs and Casino** which attracts nearly 3 million visitors annually per 2009 numbers.

Family-friendly attractions in the area include Waldameer Amusement Park, the Erie Zoo, Splash Lagoon Indoor Waterpark, Family First Sports Park, Experience Childrens Museum, and sporting events at Erie Insurance Arena. Just a few of the cultural resources in Erie include the Warner Theatre, Erie Art Museum, and the Blasco Public Library and Maritime Museum.

Approximately 11 million visitors enjoyed Erie County's top attractions in 2009 (the last year data was available). Access to these destinations is key to the quality of life for Erie residents and the economic vitality of the county. Based on the personal travel survey and public meeting responses conducted during the development of the LRTP, frequent destinations for local and countywide tourism were mapped (Exhibit 11 & Appendix A).

Exhibit 11 – Regional Tourist Destinations



2 - Safety & Security

Transportation safety and security are federal planning factors that ensure public safety through planning for improvements to high-crash locations, safety at school zones and rail crossings, emergency vehicle accessibility and assessment of emergency detour routes from the interstate. PennDOT Connects specifically calls out Safety & Security as a key areas to be discussed during the early collaboration between state and local officials and the public, including safety issues/concerns and emergency services accommodations.

Federal Highway Administration (FHWA) highly supports and encourages a collaborative and coordinated process to review and analyze crash data on state and locally owned roads in order to identify locations to conduct safety field views. The safety review process can also be a useful way to bring further attention to the various Priority Safety Focus areas in the Pennsylvania Strategic Highway Safety Plan, and implementation activities. For highway projects that are the result of safety concerns, FHWA recommends that **Roadway Safety Audits** (RSA) should be performed to pinpoint exact improvements to be made to the intersection.

The RSA should be performed by a multi-disciplinary team independent of the project to consider all road users and account for road user capabilities and limitations, culminating in a formal RSA report. The field views may also involve local police, local elected officials, county planners, municipal roadmasters, PennDOT County maintenance personnel, and others (such as freight stakeholders) in order to have the advantage of input from those different perspectives. Frequently these reports lead to recommended improvements that a traditional safety review may not discover, and these low-cost improvements may show successful reductions in crash frequency and severity. Some DOT's report that performing a RSA in the conceptual or preliminary design phases of a planned project brings about the most benefit. As projects are selected for implementation, the project sponsor should consider pursuing a formal RSA to ensure appropriate safety measures are completed. The field view portion of the safety review process helps to better understand the driving conditions and driver behavior, and aids in the brainstorming to develop potential solutions to address safety problems. This collaborative approach is fully consistent and complimentary to the new PennDOT Connects Policy.

An example of a safety improvement that could be used throughout Erie County on a number of corridors is the Road Diet, illustrated in the images below. A classic Road Diet typically involves converting an existing four-lane, undivided roadway segment to a three-lane segment consisting of two through lanes and a center, two-way left-turn lane. FHWA reports that the resulting benefits include a crash reduction of 19 to 47 percent, reduced vehicle speed differential, improved mobility and access by all road users, and integration of the roadway into surrounding uses that results in an enhanced quality of life. A key feature of a Road Diet is that it allows reclaimed space to be allocated for other uses, such as turn lanes, bus lanes, pedestrian refuge islands, bike lanes, sidewalks, bus shelters, parking or landscaping.

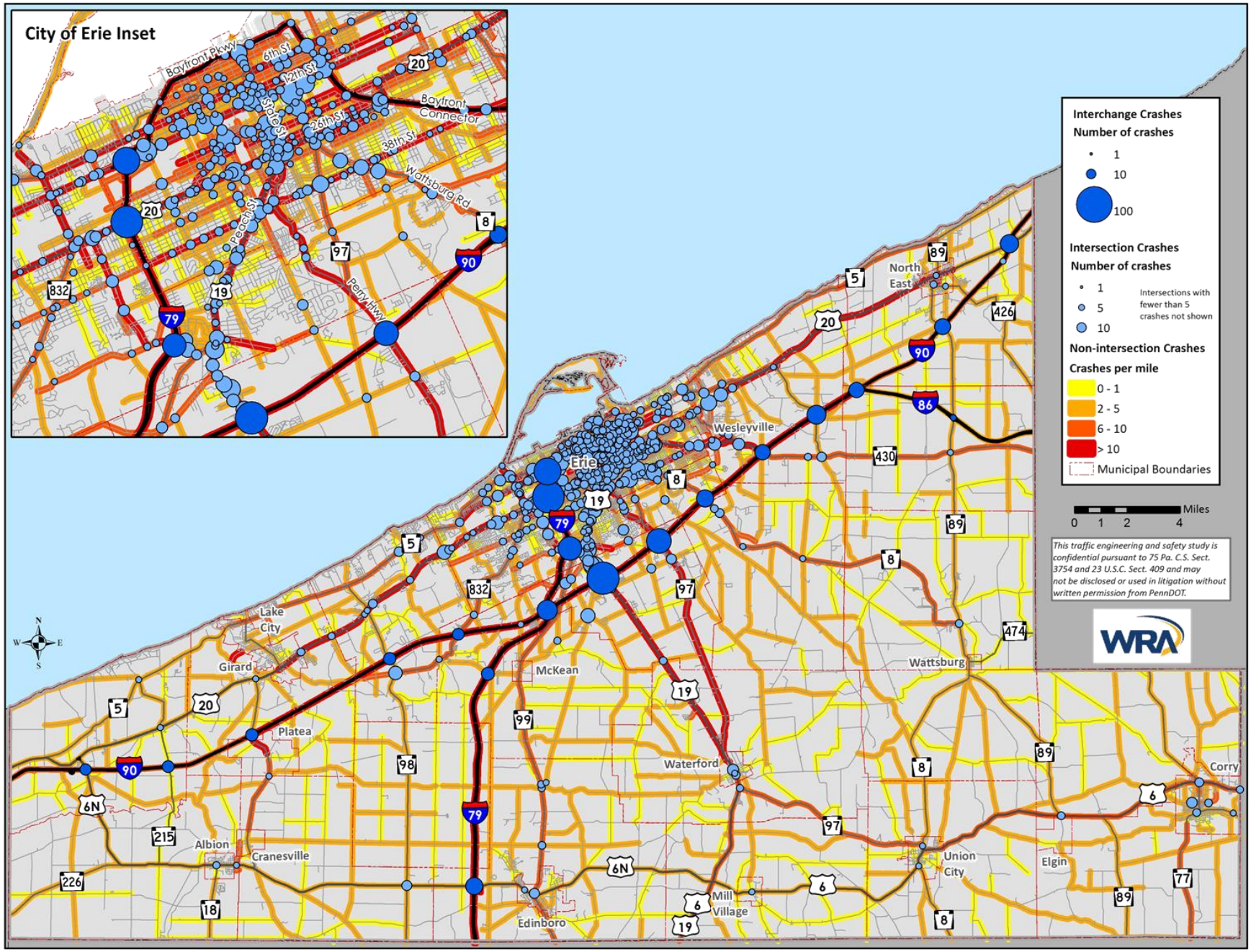
Example of a Road Diet to enhance safety, mobility, and access for all road users and a "complete streets" environment
Source: FHWA

Crash History

Historical crash data for Erie County was obtained from PennDOT's crash database for the five-year period spanning 2011 through 2015 and included individual crash latitude and longitude and crash severity. This crash data was converted into a GIS shapefile using the latitude/longitude. Using the Erie County roadway network, crashes were classified as interchange (occurred on/between interchange ramps or at intersections with interchange ramps), intersection (occurred within 100 feet of an intersection), or roadway segment (all remaining crashes).

Once the crashes were classified, the average number of crashes during the five year period for each interchange, intersection, and roadway segment was determined and mapped (Exhibit 12). The crash data, along with PennDOT Crash reports, was used to identify and confirm high crash rates as reported by the public, municipalities, and stakeholders. Reference and maintenance of crash data can help to identify priority areas where limited funds might be best allocated at various levels of planning. Overall goals should focus on reducing crash frequencies for motorized travelers, pedestrians, and bicyclists countywide.

Exhibit 12 – Crash Map



School Zone Safety

Some of the youngest users of the county's transportation system can be found walking, riding a bicycle, or riding a bus to and from school. Traffic congestion, speeding, and driver inattentiveness coupled with the inexperience of school-aged children can create a hazardous interaction. Some of Erie student families do not own a personal vehicle, so the only means of transportation for many students to school is by walking. The maintenance and improvement of school zone safety in Erie is imperative (Exhibit 13). Projects that enhance sidewalks and crosswalks, signing, pavement markings, lighting and traffic signals, or narrow crossing distance all help to calm traffic and improve safety. The LRTP considers project elements such as these to evaluate a project's ability to improve the safety a school zone or school related activities.

Opportunities to improve school zone safety should be emphasized over time. While these issues could be addressed with standalone projects, in many cases it may be more practical or efficient to incorporate relevant aspects into more broadly scoped projects such as corridor improvements or betterments, streetscaping initiatives, or traffic signal improvement programs.

Pennsylvania's Safe Routes to School Program, which is now funded under the Transportation Alternatives Program, awards walkability audits in Erie County in order to identify and prioritize improvements along routes to school to enhance safety and accessibility for students.

These two day walking assessments evaluate the physical conditions, as well as the behavior of students and motorists along student walking corridors. After assessment and input from school officials and the community, a comprehensive final report is produced with short, medium and long term recommendations to improve the walking routes which can then be used to apply for funding. Municipalities and schools are encouraged to apply for the program.

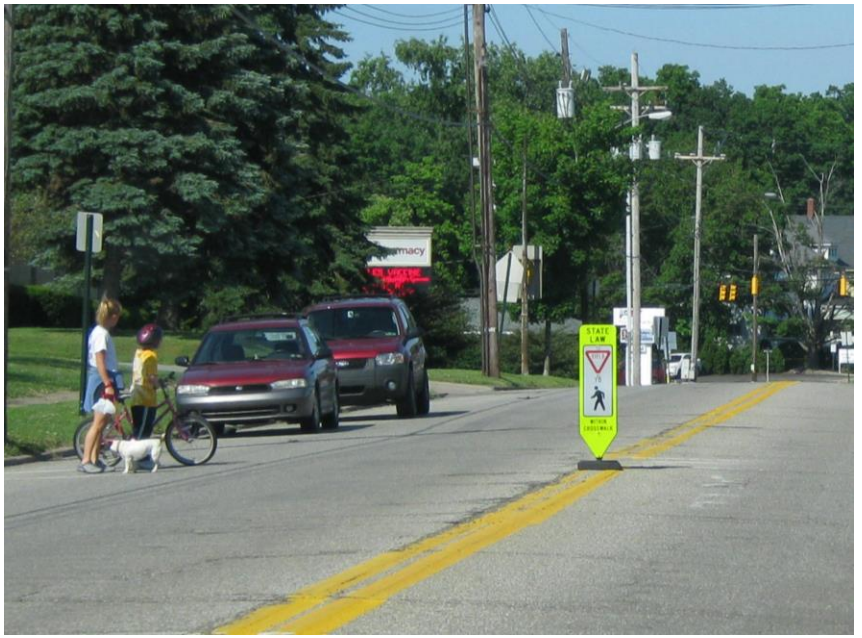
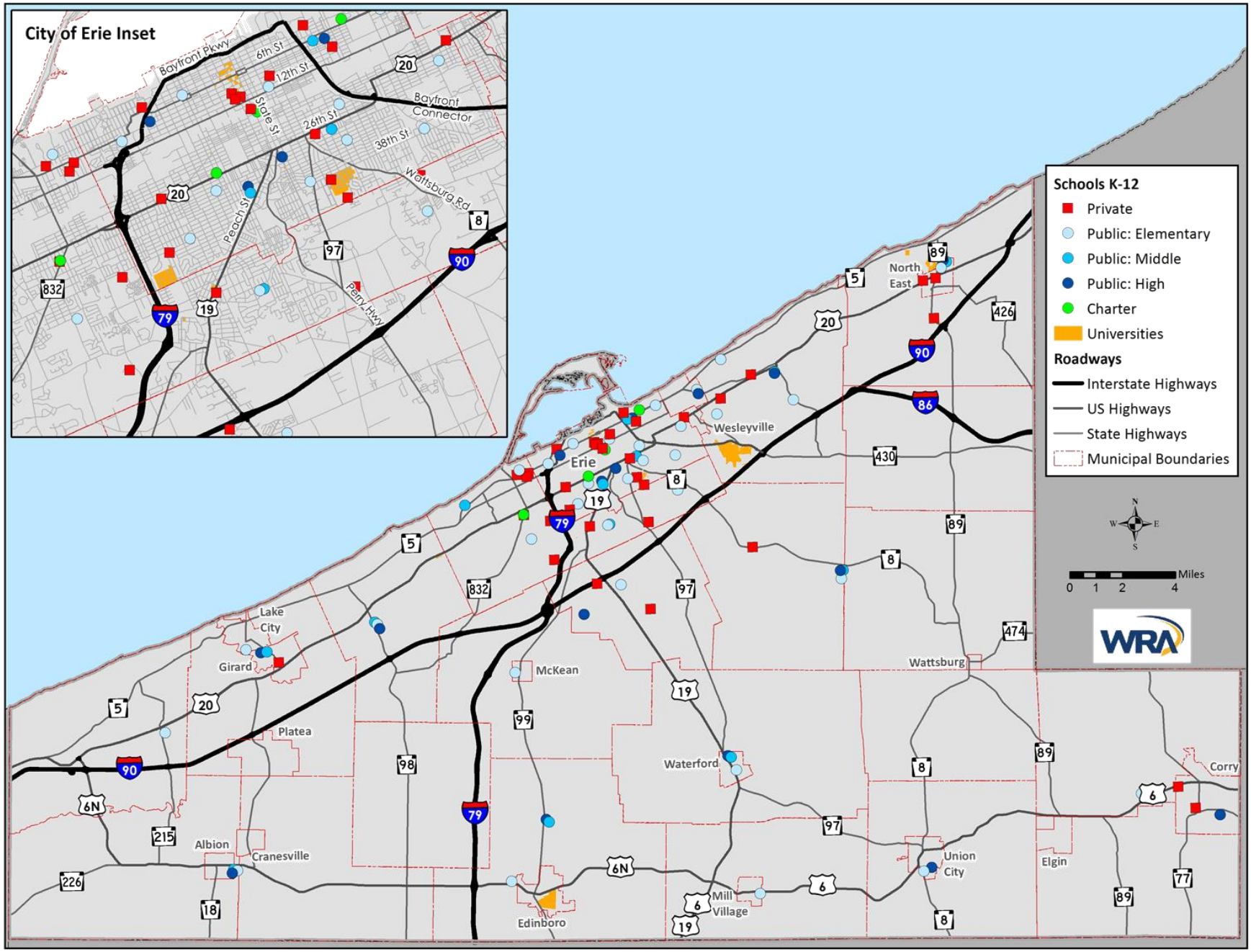


Exhibit 13 – Erie County School Locations



Rail Crossings

Based on a 2012 inventory by the US Department of Transportation's (USDOT) Federal Railroad Administration (FRA), approximately 179 public at-grade highway-rail intersections were identified in Erie County. Conditions at these crossings (e.g., the historic number of accidents, types of warning devices, daily train volumes, or daily highway crossing volumes) can be reviewed via the FRA's Web Accident Prediction System (WBAPS). The WBAPS data is not intended to rank crossings as most to least dangerous. It does, however, provide one method of comparative insight to help determine which at-grade crossings might require additional evaluation or specialized attention.

Future planning efforts should embrace or explore local knowledge, site planning, potential traffic pattern changes, crossing volume reductions, and data sources such as the FRA's WBAPS model, to give special attention to ensure and improve safety at all of the county's highway-rail crossings. Such efforts will help to apply scarce highway-rail crossing resources where they might be best utilized.

Emergency Management

Representatives from the Erie County Emergency Management Agency were interviewed as part of the stakeholder engagement process to determine problem areas and potential transportation investments that would improve transportation safety, security, and emergency management. Particular concerns included I-90 detours, railroad interaction, and underheight bridges (Exhibit 14).

Various natural hazards and manmade hazards can affect the **security** of the transportation system. Erie County last completed its County Hazard Mitigation Plan in 2012; according to the Hazard Mitigation Plan, the history of previous disaster declarations in Erie County were due to hurricanes, flooding, blizzard, and tornado. Natural hazards in Erie include coastal erosion, drought, earthquake, floods, invasive species, landslides, tornados, and winter storms.

While all hazards have some possibility of occurring, a unique and possibly fatal hazard that coastal residents and businesses of Erie County experience is shoreline erosion and bluff recession; properties, buildings, and roadway within an inadequate setback distance are at risk for damage or complete destruction of property, and if properties are occupied at the time of an avulsion event, loss of life or injuries. The municipality with the highest percentage of housing stock within the 100-year erosion hazard area is Millcreek Township, comprising 41.9% of the buildings in Erie County's erosion hazard area. Care must be taken to account for these setback distances when evaluating future land use and transportation alternatives.

During colder weather months, residents of Erie County are likely to experience winter weather hazards such as lake effect snow, ice, blizzards, and extreme cold. Snow is a common hazard to the transportation system, as Erie County experiences an average yearly 104 inches of total snowfall over 2,015 lane miles of snow, as reported by PennDOT District 1-0's Annual Report Card. An important discussion topic during the interview with EMA was weather-related traffic accidents on Interstate 90, that frequently lead to pile-ups on the interstate and full closures that divert traffic onto emergency detour routes (Exhibit 15). Potential transportation related solutions could be variable message signs, changeable speed limits dependent on weather conditions, improved pavement retro-reflectivity, and improvement of intersections and bridges along detour routes.

Exhibit 14 – Underheight Bridges

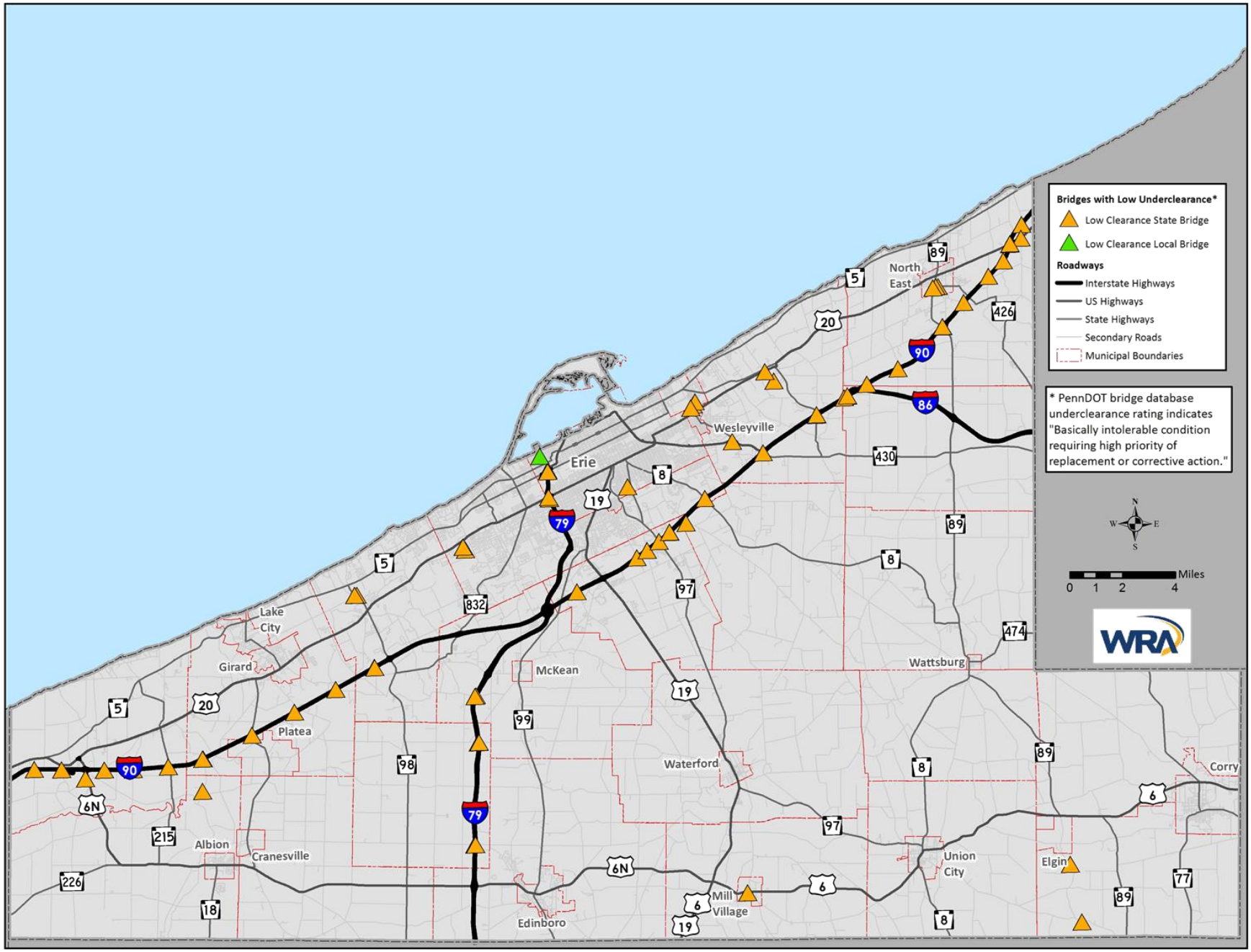
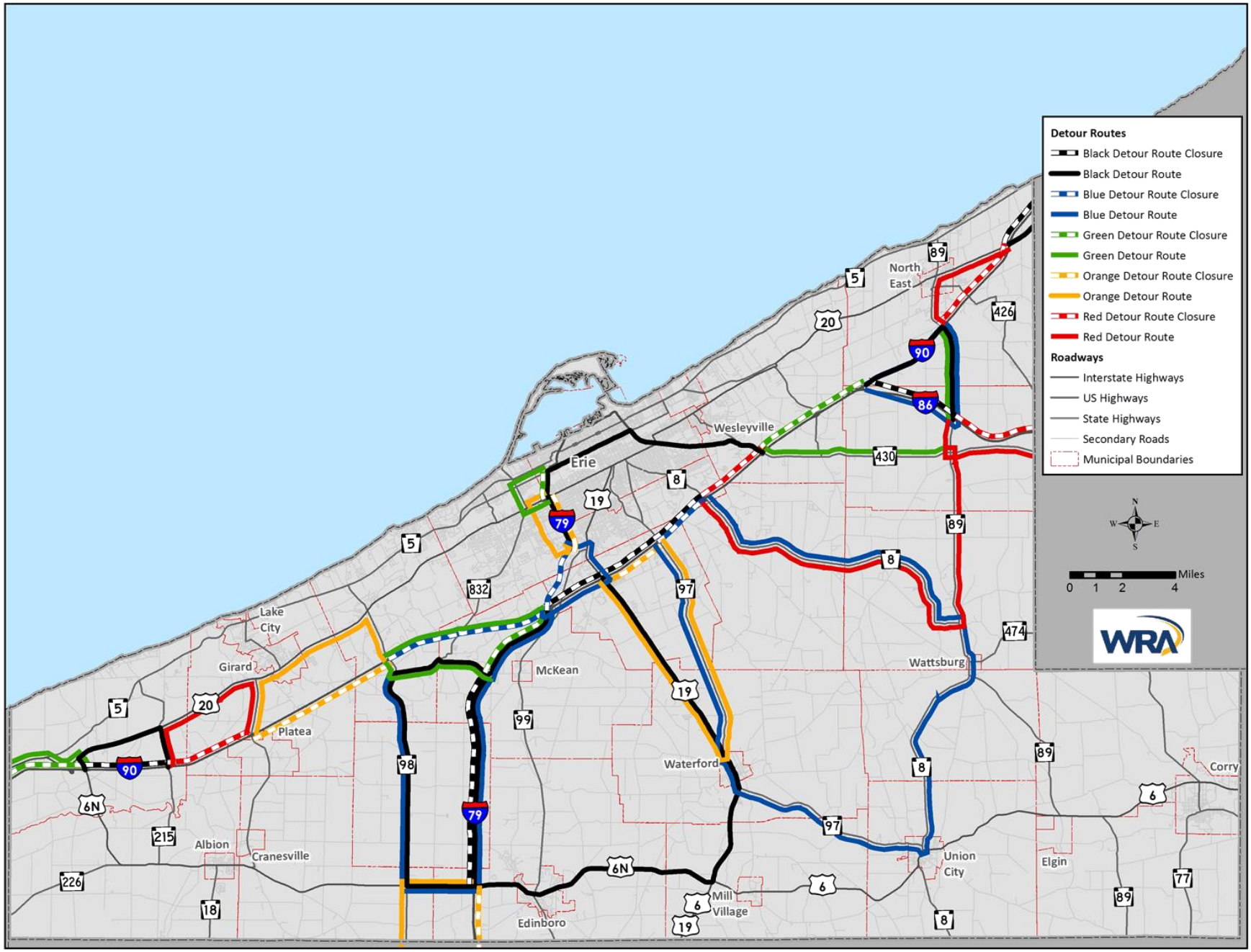


Exhibit 15 – Emergency Detour Routes



3 - Multimodal Accessibility & Mobility

Perhaps one of the most obvious factors when it comes to a long range transportation plan would be multimodal accessibility and mobility. In this section, the automobile, pedestrian and bicycle, public transportation, aviation, and port modes and their interactions are examined in detail. Multimodal accessibility and its impact on quality of life and economic competitiveness are an important early consideration in the PennDOT Connects planning policy, ensuring that project scoping accounts for these and improves them where reasonable.

Automobile

The automobile system in Erie County consists of three interstates I-90 running east-west connecting through Ohio, New York, and beyond, I-79 with its northern terminus at Erie's Bayfront Parkway connecting southward to Pittsburgh, and I-86 beginning around Harborcreek Township and running eastward through New York State. The roadway system in Erie County contains a significant percentage of National Highway System (NHS) routes, which are identified as being critical to the national freight network and as such, may qualify for special funding for roadway improvements such as the National Highway Performance Program (NHPP). There is also a robust system of state and locally owned primary arterials, collectors, and local roadways maintained by municipalities (Exhibits 16 & 17).

The Average Daily Traffic (ADT) map shows the daily number of vehicles traveling over the roadway in both directions. ADT traffic volumes can give perspective on which roadways are the most traveled, though not necessarily the most congested (Exhibit 18).

Exhibit 16 – Erie County Roadway Network

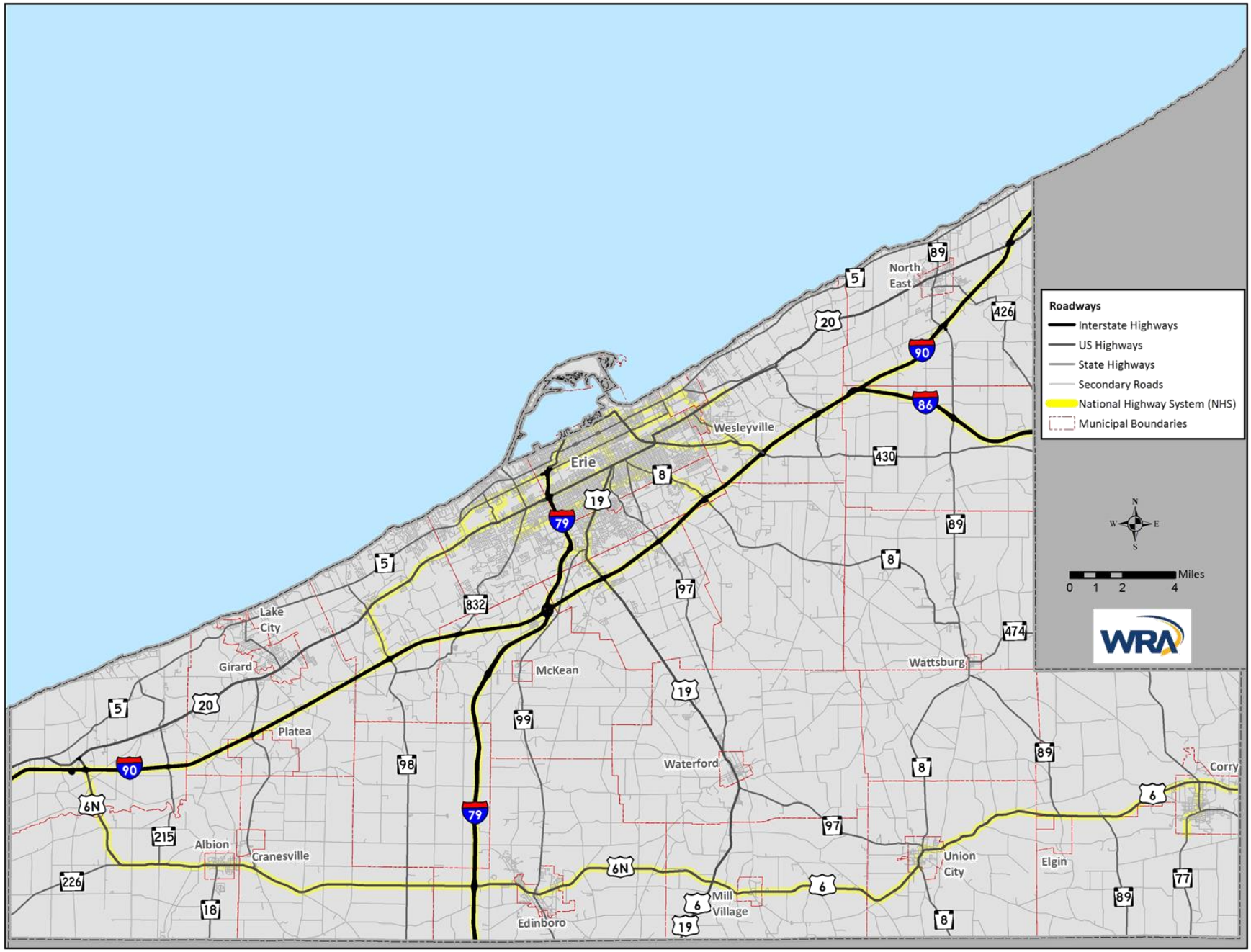


Exhibit 17 – Erie County Roadway Functional Classification

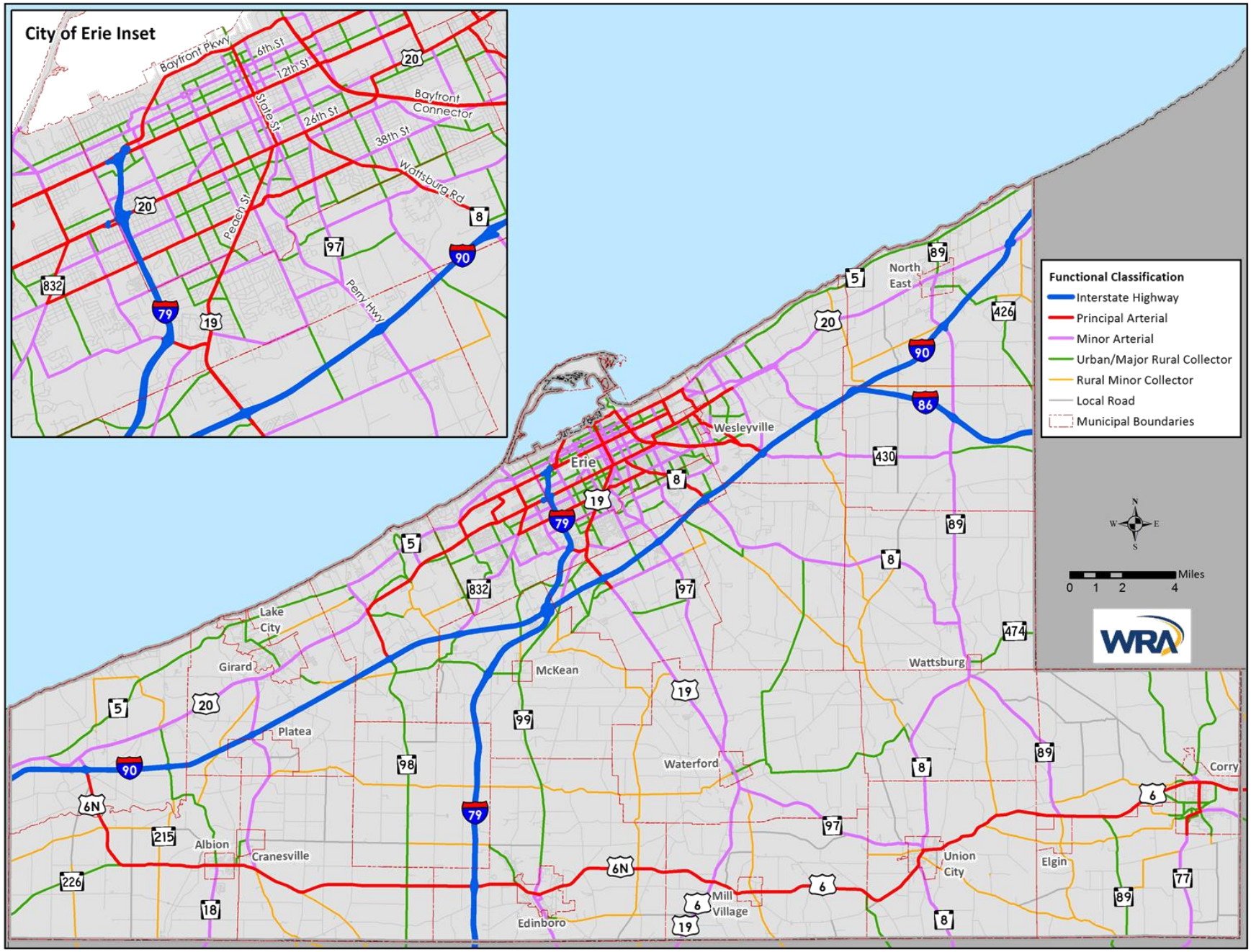
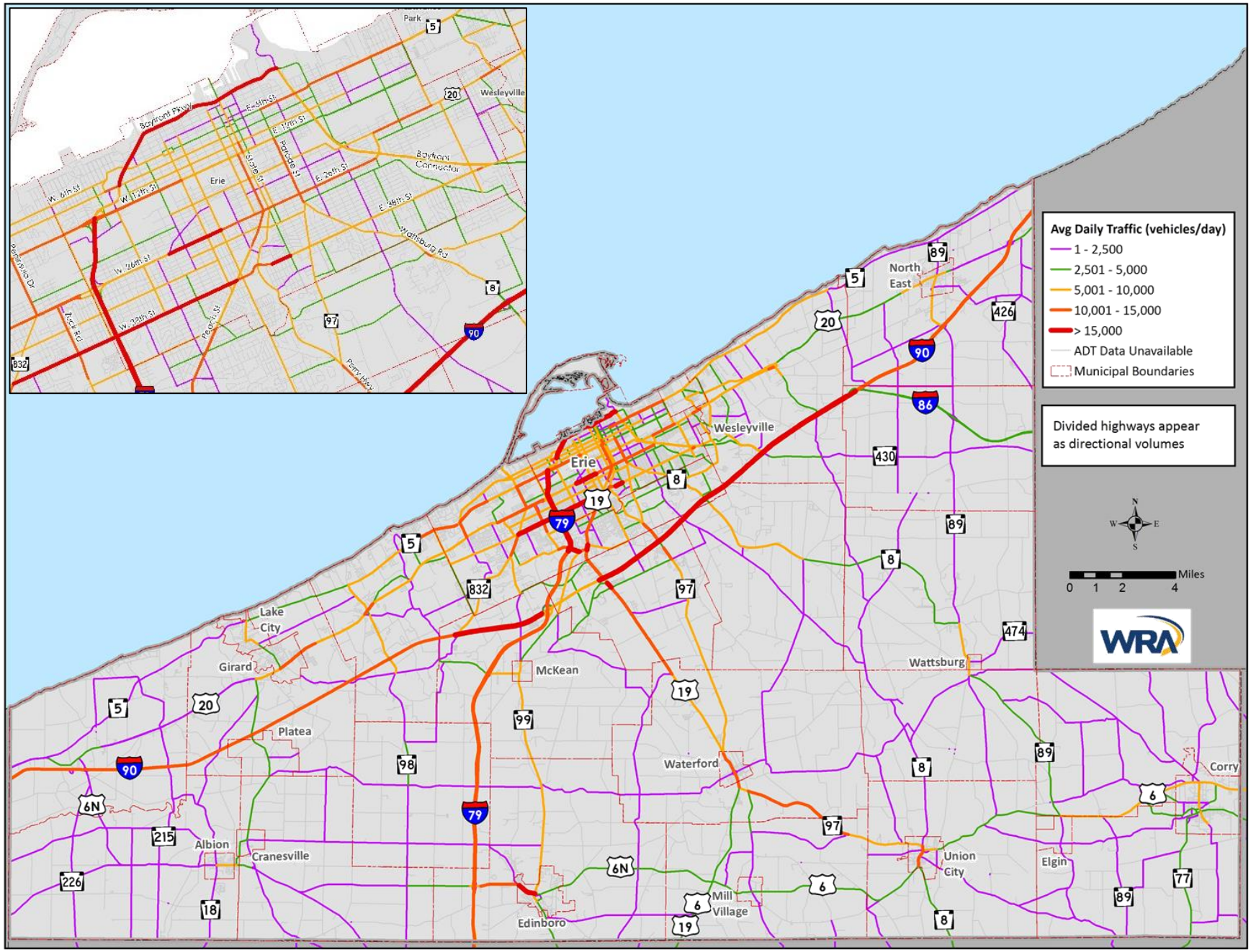


Exhibit 18 – Average Daily Traffic (ADT)



Pedestrian & Bicycle

Mode interconnectivity and personal mobility are the Federal planning factors that warrant a detailed investigation of bicycle and pedestrian infrastructure. For bicyclists and pedestrians, infrastructure can include sidewalks, trails, bicycle lanes, or wide shoulders to provide accessibility and mobility options for segments of the population who have low vehicle ownership, including the impoverished, school children, and the elderly.

Most urbanized areas within Erie have robust sidewalk infrastructure, though many are in need of upgrades, or have notable gaps at property lines or rail crossings. 38% of public survey respondents walked on dedicated sidewalks near their home. Residents reported deficiencies due to lack of maintenance, tree roots, uneven brick or cobbles, and overgrown grass. Townships in the county own few or no sidewalks, though many residents report walking on low volume local roads for transportation or exercise. 45% of public survey respondents walked or biked on local rural roads near their home. In 2016, the Federal Highway Administration published a Small Town and Rural Multimodal Networks Handbook that illustrates appropriate solutions for pedestrians and cyclists in lower-volume contexts that satisfy the needs of the public and the municipality.

A key finding from the listening tour are critical gaps in infrastructure between residential populations and destinations such as jobs at retail shopping centers, the Peninsula, and grocery stores. For households with access to vehicles, this is merely a missing option or mild inconvenience. For people whose only mode to access these locations is through public transit or sidewalk, these gaps pose an accessibility and potentially safety concern. The LRTP recommends coordination between municipalities and private developers to include sidewalk and transit amenities on developing property where feasible.

PennDOT conducts betterments on state routes on a cyclical basis to maintain pavement and stormwater facilities. During project scoping, improvements can be added to install new or improve sidewalks and bike lanes. To assist PennDOT with the task of identifying key bicycle and pedestrian routes, a map of the public's key bicycle and pedestrian corridors to be used when planning bicycle and pedestrian facilities for betterment projects can be found in Chapter 4.

PennDOT's Local Technical Assistance Program (LTAP) assists participating municipalities with their Walkable Communities Program (WCP), which serves to identify key areas of concern for pedestrians and potential treatments to improve safety and accessibility. Municipalities can then use the completed WCP to apply for funding to implement recommendations. Examples of common solutions include pedestrian push buttons and countdown timers, regulatory & guide signs, signal improvements such as lead pedestrian intervals, installation of crosswalks, shoulders, delineators, turn restrictions, overhead pedestrian rapid flashing beacons, and curb extensions / bulb outs. Many pedestrian and bicycle projects could be eligible for Transportation Alternatives Program (TAP) funding from the state; TAP project funding is awarded on a competitive basis.

The project team heard many comments and support for **multi-use trails and bicycle lanes** on the listening tour. The public survey indicated that 24% of respondents travel to a trail for recreational walking or biking. Active transportation can improve health and well-being through exercise. As Erie County is rich with local recreational destinations, it is important for tourism and quality of life to provide facilities for residents and visitors to reach these conveniently. The Seaway Trail along Route 5 runs east west through the county, along with Bicycle Routes Y and Z, which connects Presque Isle in Erie County with Ohio and New York. This multimodal system is important for recreation, tourism, and providing mode choice for travel. Existing paved trail facilities in Erie County include trails at Presque Isle State Park, Asbury Woods Park, Erie Bluffs State Park, and the Corry Junction Trail (Exhibit 19). Inactive or abandoned rail lines are identified on this map for their potential use as rails to trails.

BikeErie is a local organization of cyclists advocating for new trails and connections in Erie County. Members of this group and local bike shops were interviewed to identify their goals and objectives for trails. A critical focus is to promote and construct an Erie Urban Loop Bike Trail, roughly following Greengarden Boulevard, 38th Street, and a north-south route through downtown Erie to provide a beltway of multimodal, safe, and accessible options for all neighborhoods in Erie to enhance non-motorized travel to work, school, grocery stores, and medical facilities.

There is also a desire to repurpose inactive railbeds as rails-to-trails; in the west county is the potential Albion Rail Trail that would connect Lake Erie Bluffs State Park to Albion and further south. In the east county is the potential East Branch Extension Rail Trail, which would connect to the East Branch Trail in Spartansburg across the county line.

US 6 has been identified through planning studies as a candidate for widening improvements to add bicycle lanes and official signing and marketing as a regional trail. US 6N has also been identified as a candidate for the bicycle lanes, though support for the eastern portion of the route along US 6 appears to have more momentum initially due to the potential to interconnect to the Corry Junction Trail and relatively lower anticipated cost.

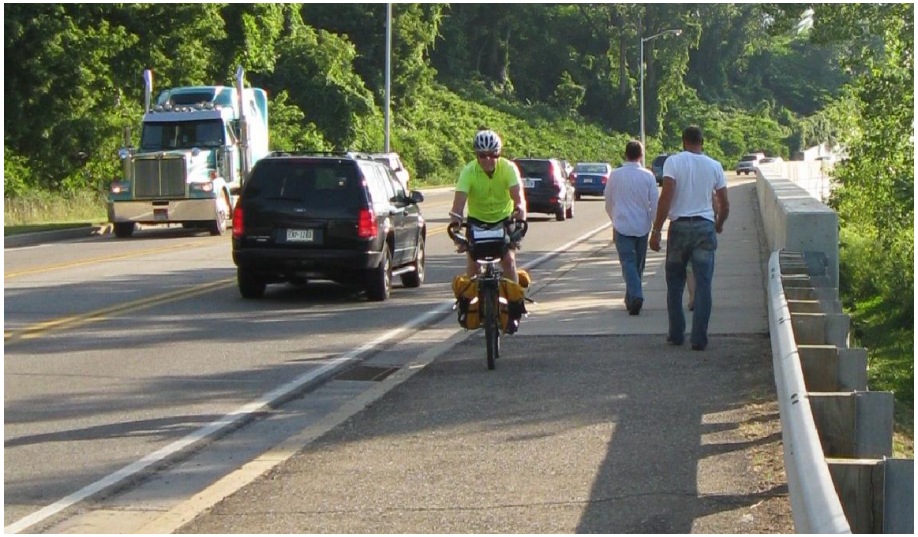
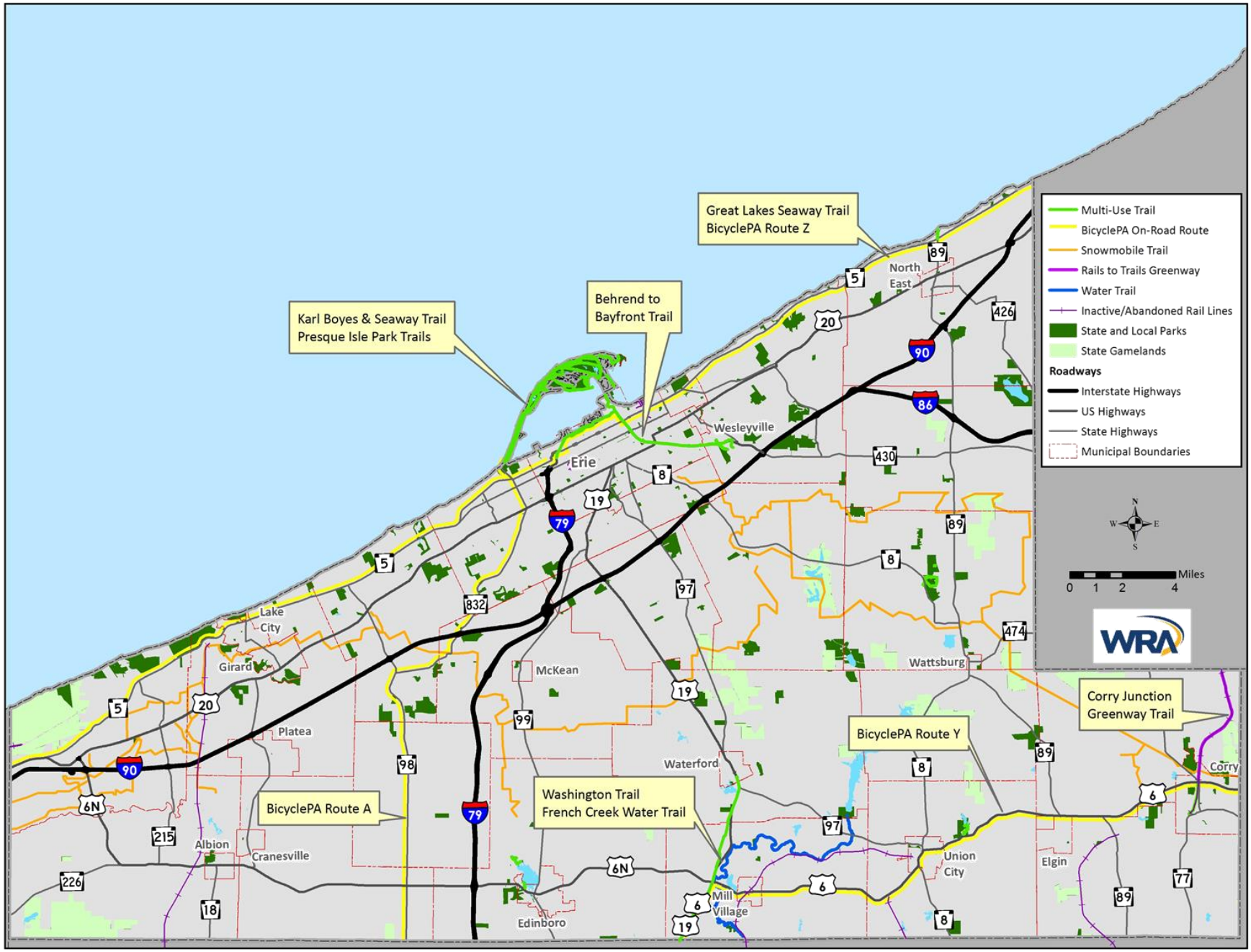


Exhibit 19 – Pedestrian & Bicycle Trail Facilities



Public Transportation

Transit services address personal mobility by providing transit choices and mobility for people who do not have access to personal motor vehicles or prefer not to drive. PennDOT Connects policy encourages project scoping to consider the addition of transit amenities where feasible and warranted. Erie County is served by the Erie Metropolitan Transit Authority (EMTA) who operates the fixed-route bus service called “the E” that runs throughout downtown and to some rural municipalities, the door-to-door paratransit shuttle pick-up service called “the E LIFT”, and the BayLiner Trolley, a free trolley service between downtown businesses along State Street.

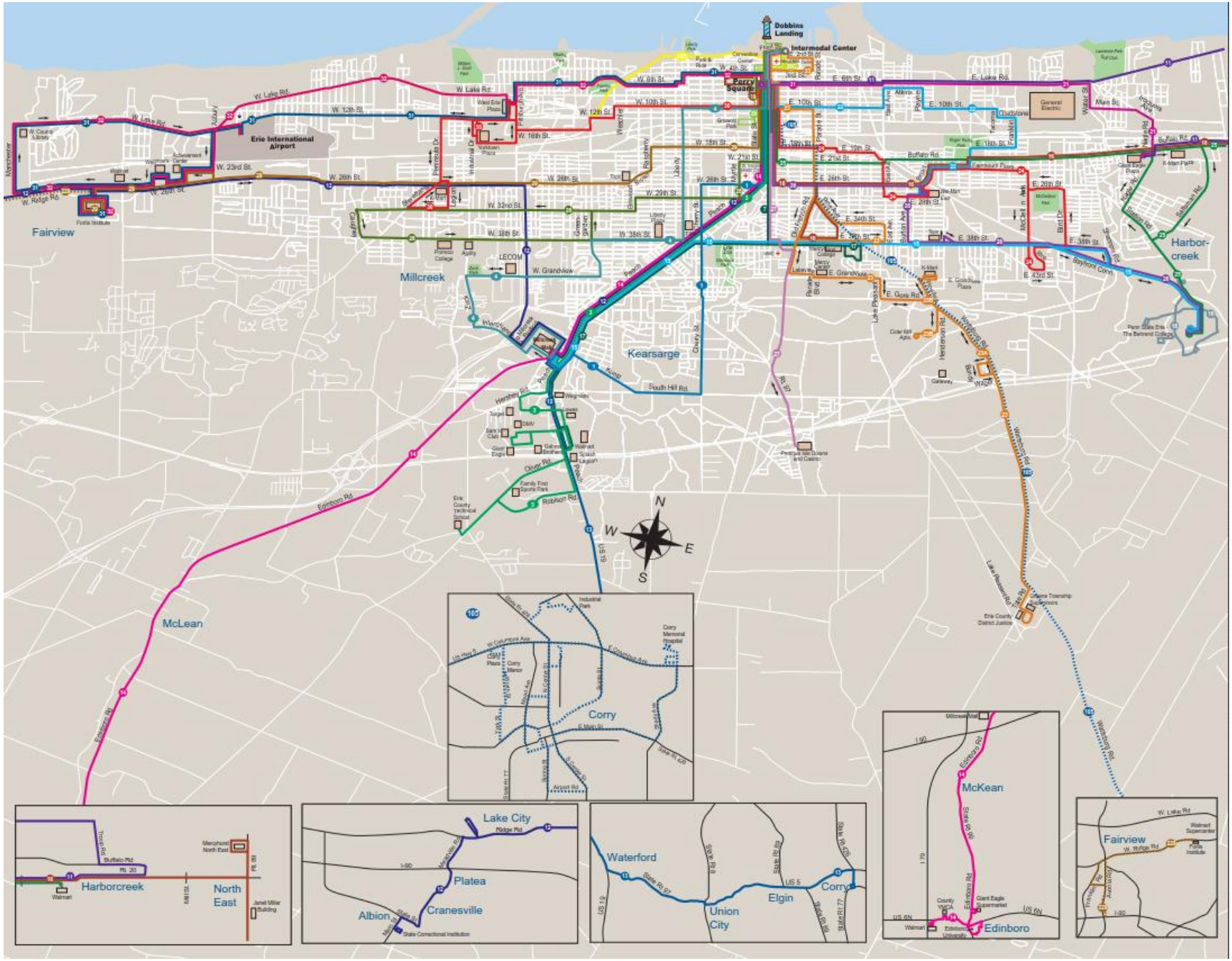
The 2017 EMTA System map is shown in Exhibit 20. Notably, the transit lines currently serve downtown Erie, the Millcreek Mall and Upper Peach Street, Harborcreek area, Lake City, and Waterford, among other special routes to college campuses at Penn State Behrend, Mercyhurst North East, and Edinboro University.

16.3% of the public survey respondents reported using the bus as a form of public transportation, which is slightly less than those who reported use app-based ridesharing services such as Uber and Lyft (16.9%). EMTA is keeping pace with technology by providing app-based bus tracking services such as myStop and Trakr to its riders free of charge.

Common concerns regarding transit overhead during the listening tour include notable gaps in the route system, particularly to Presque Isle, late-night service from large employers, long route times, more frequent access to Corry and outlying communities, and dependable service for shift-working employees to reach industrial manufacturing employers in the county. Another concern was access to taxi service and Americans with Disabilities Act (ADA) accessible Uber and Lyft.

During the development of this LRTP, EMTA kicked off an update of their transit routes and schedules to better serve the citizens of Erie through the Transit Development Plan. This plan is estimated for completion in late 2018.

Exhibit 20 – 2017 Transit Route System



Intercity Travel

Intercity travel is an important component of personal mobility and accessibility within a region, as it allows residents access to employment opportunities, as well as cultural and recreational destinations outside their area. Greyhound Bus Lines is the major intercity bus line operating in the region, and Amtrak is the major intercity rail provider to neighboring regions in Pennsylvania, Ohio, and New York. A Greyhound station is located at the Erie Intermodal Transportation Center on the Bayfront Parkway which serves Greyhound and EMTA buses. The facility offers an indoor waiting area for pre-paid ticket holders. As of January 2017, there are 10 scheduled bus routes operating through Erie, connecting the following destinations on a daily schedule:

- Cleveland, OH and New York City, NY
- Cleveland, OH and Boston, MA
- Buffalo, NY and Cleveland, OH
- Erie, PA and Pittsburgh, PA

Amtrak

Amtrak train routes allow long distance intercity travel between major destinations. Erie County has one Amtrak station near Peach and 14th Street at Union Station, which is near the EMTA headquarters. This station offers daily service on Amtrak's Lake Shore Limited line, providing direct access to Chicago, Cleveland, Albany, New York City, and Boston.

Local Amtrak-related concerns generally focused on the limited frequency and late-night schedule of the route, including the availability of late-night bus service and confusion regarding station parking. Public comments highlighted interest in improving service schedules to/from Cleveland, adding passenger service to Pittsburgh, and investing in high-speed regional rail service.

Lake Shore Limited

New York/Boston - Albany - Chicago

Aviation

Aviation facilities are an important component of the overall transportation system in Erie County because they provide mobility options for residents, travelers, and air freight. There are many private airports and recreational aviation facilities in Erie (Exhibit 21).
The two public airports are:

- Erie International Airport/Tom Ridge Field (FAA Identifier: ERI)
- Corry-Lawrence Airport (FAA Identifier: 8G2)

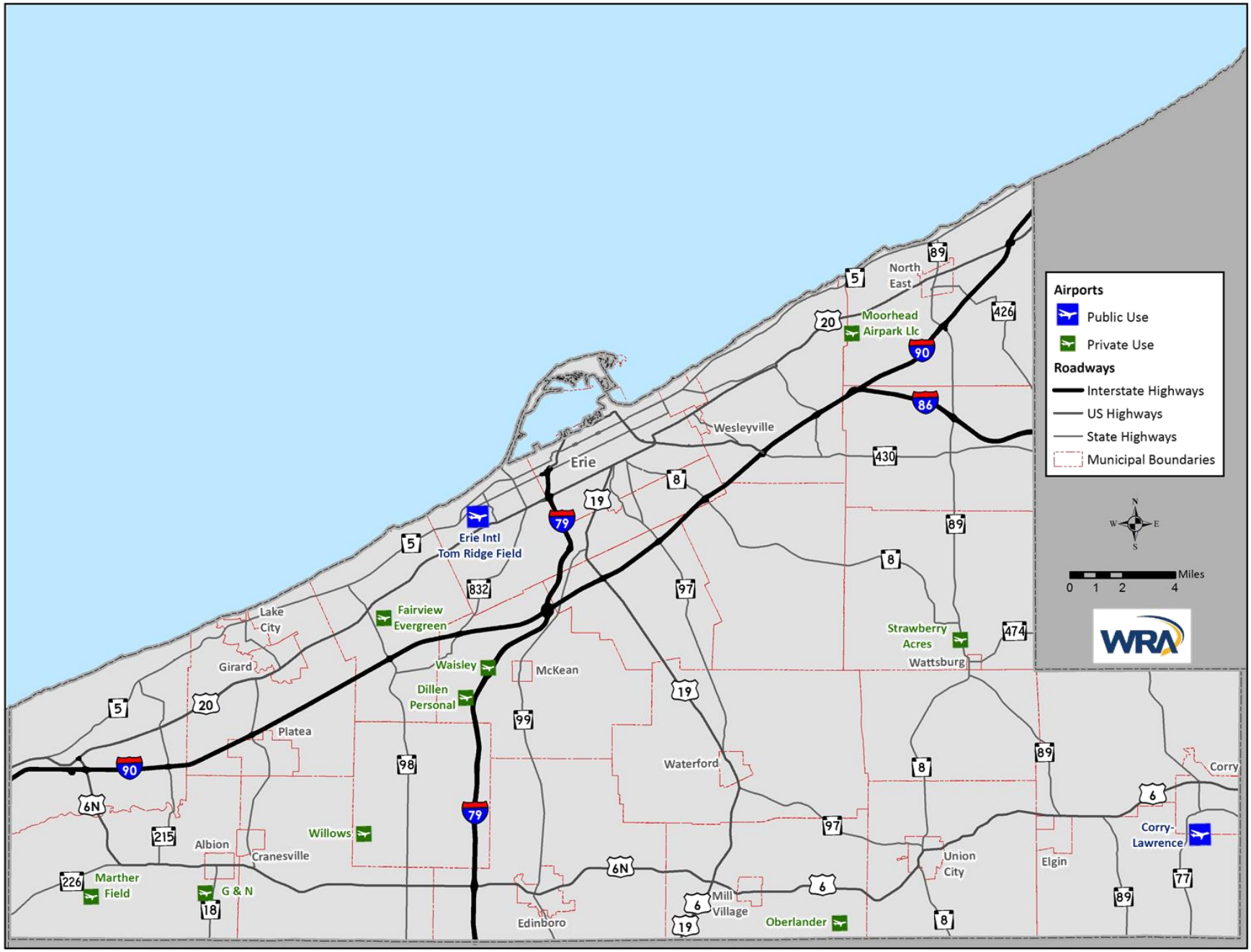
PennDOT's Bureau of Aviation provided insight into Corry-Lawrence Airport's capital improvement plans for the long-range portion of this transportation plan. The Erie International Airport Aviation Authority was interviewed to discuss their long-term plans for the airport as input to this LRTP update. Their capital improvement projects can be found in Appendix E.

Public comments from recreational seaplane enthusiasts pointed toward a lack of facilities for seaplanes on Lake Erie or Edinboro Lake, as well as a lack of public heliports and helistops. The addition of public facilities for use could enhance intra-county transportation and connect Erie County with other areas of Pennsylvania, the US, and Canada using these modes of transportation. It was noted that Presque Isle Bay and Lake Erie are navigable waters that qualify for seaplane operations as permitted by the US Coast Guard, Army Corp of Engineers and the Federal Aviation Administration.

Corry-Lawrence Airport (above)

Erie International Airport / Tom Ridge Field (above)

Exhibit 21 – Erie County Private and Public Airport Facilities



Port

Bordered on its northern edge by Lake Erie, waterborne transportation and waterfront access for both freight and recreational purposes are vital components of the quality of life and economic vitality of Erie County. Today, the Port of Erie is multi-faceted; while it continues to serve industrial and trade interests, it is also central to capitalizing upon the economic and recreational opportunities of Lake Erie for residents and visitors. Throughout the area, marinas, beach fronts, fishing opportunities, scenic vistas, and related local waterfront access are integral and valued components of life in Erie County.

The Erie-Western Pennsylvania Port Authority (EWPPA) owns and manages the Port of Erie in a manner that surpasses the traditional concept of a working port to that of a valuable component of Erie's character. EWPPA leads or is involved with many efforts to meet their mission to "promote industrial, commercial and recreational opportunities for the citizens of Pennsylvania on Presque Isle Bay and adjacent waters."

The Port of Erie last published its Master Plan in 2009 and has requested proposals for an update to the master plan in early 2017. The master plan should be updated every few years and analyze land use and traffic circulation, economic vitality, multi-modal accessibility, recreational trails, freight and intermodal needs, as well as recommendations for improvements. The future of the area surrounding the Bayfront should be accessible, equitable, sustainable.

4 - Freight Accessibility & Mobility

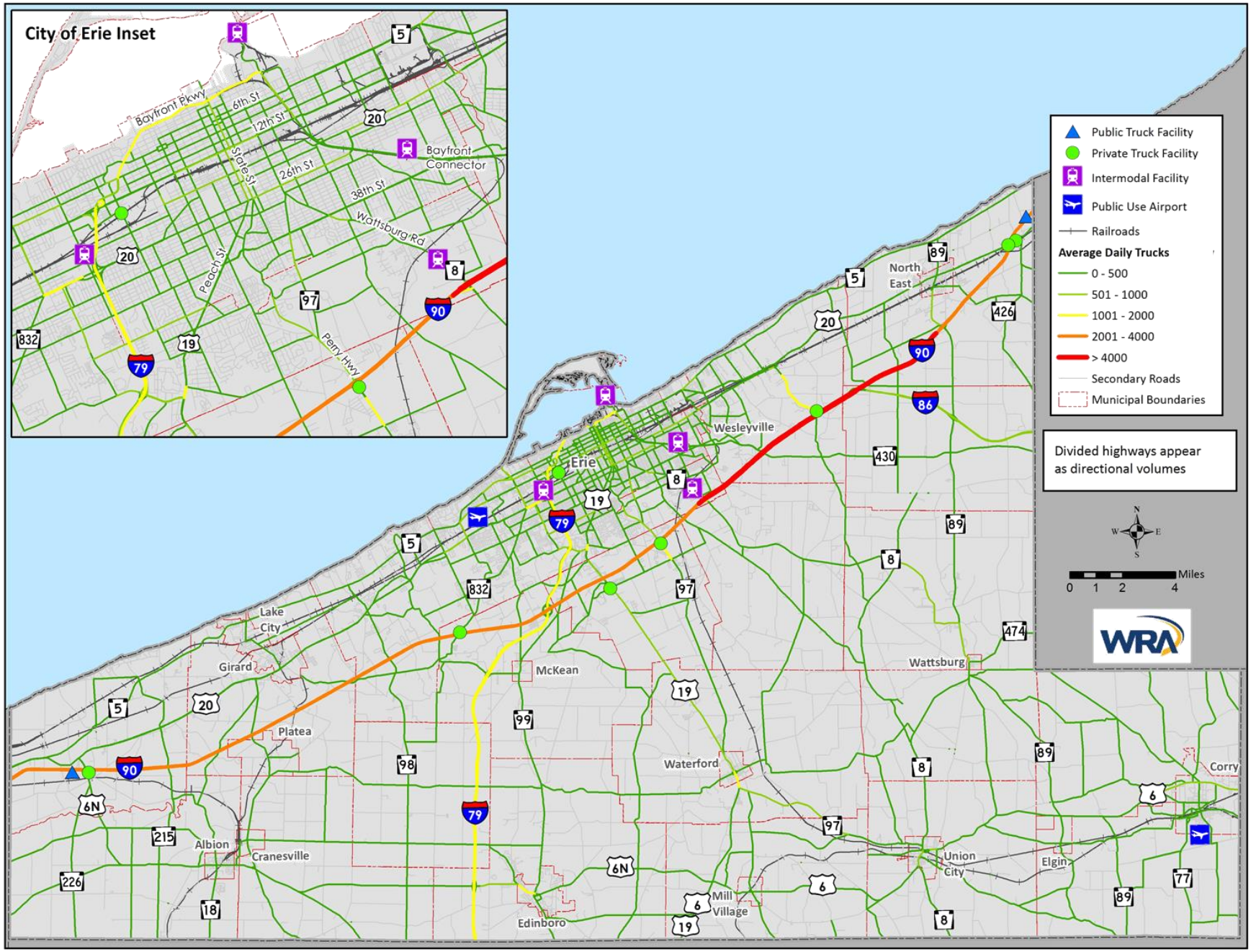
Personal and freight mobility and economic competitiveness are two Federal planning factors that lead to an analysis of how the transportation systems impact the economy in Erie County. In support of freight planning, PennDOT Connects requires project managers to give early consideration to the presence of / impacts from current and future freight-generating land uses.

Erie's proximity to population centers, as well as industrial infrastructure that developed in the early days of the steel industry and railroad boom, along with its active rail lines, an international airport, water port access to the Atlantic Ocean and Canada, and interstate access provide Erie unique economic capacity. Erie County's freight system was inventoried as part of the LRTP (Exhibit 22).

Interstates 90, 79, and 86 run through Erie County, providing access to markets within an approximately two-hour driving time in Pittsburgh, Cleveland, and Buffalo.

The majority of freight in Erie County is transported by **truck**, though the City of Erie and outlying municipalities are still tied directly in to the **railroad system**, as most of the settlement in the county developed around significant rail access and rail support industries. Rail carriers include Canadian National / Bessemer & Lake Erie Railroad through Albion and Girard, the Buffalo & Pittsburgh Railroad from City of Erie through Corry, Western NY & PA Railroad between Mill Village and Corry southward, East Erie Commercial Railroad adjacent to GE Transportation, and the West Erie Shortline Railroad connecting the Bayfront with the Norfolk Southern tracks.

Exhibit 22 – Erie County Freight Network



Major Employers

Erie's major industrial corridor abuts the railroad tracks in the 12th Street / Pittsburgh Avenue corridor due to its proximity to rail lines and the interstates. Notable industrial and manufacturing firms operate in Erie County, including General Electric (GE), manufacturers of metals and plastics such as Lord Corporation, and prepared foods. The Erie Regional Chamber and Growth Partnership published the top employers in Erie County in 2011 (Exhibit 23), which was used to summarize the large industrial and manufacturing employers within Erie County.

Exhibit 23 – Erie County Industrial Employers

Company	Industry Description	Employees
General Electric	Rail, marine, drilling, and mining technology	3000+
Plastek Industries	Precision molds and plastic	800+
PHB, Incorporated	Die cast, rubber and plastic	650+
Lord Corporation	Aerospace and industrial products	700+
Welch Foods, Inc.	Processed grape juice, jelly, jam	400+
Erie Plastics	Custom injection molding	400+
Port Erie Plastics, Inc.	Custom injection molding	400+
Snap-tite, Inc.	Fluid power components, hoses	350+
EMSCO Group	Custom injection molding	350+
Ridg-U-Rak	Rack storage systems	350+
Better Baked Foods, Inc.	Frozen pizza and packaging	300+
Pinnacle Foods, Inc.	Frozen foods	300+
Barber Industries	Assembly and packaging services	300+
Zurn Industries	Steam generators	250+

The Port of Erie encompasses industrial and shipping facilities east of Dobbins Landing, and commercial, light industrial and residential uses to the west. Freight facilities include the Mountfort Terminal, which handles the port's general cargo. These facilities remain viable economic pursuits in large part due to convenient access to interstate highway system and Class I railroads.

While the existing port freight handling facilities are valuable assets, several general concerns and needs were heard regarding the economic vitality and long-term growth of the port. Some of the needs include:

- Limited rail service leading to the Mountfort Terminal – enhanced or additional rail access is desirable to add capacity
- Freight volume through the Port has been almost entirely limited to one commodity, aggregates, and diversification into new markets is desirable
- Existing equipment within the port could be better utilized and future commodity diversification could require new storage or material handling equipment
- The location of the port in navigable waters between nearby markets in Canada and Northern Europe provide the Port of Erie with significant potential.

Freight Tonnage

PennDOT's Statewide Commodity Flow Tool was used to analyze the commodities being transported into and out of Erie County through all modes of transportation. Erie's top five outbound commodities by tonnage (Exhibit 24) include:

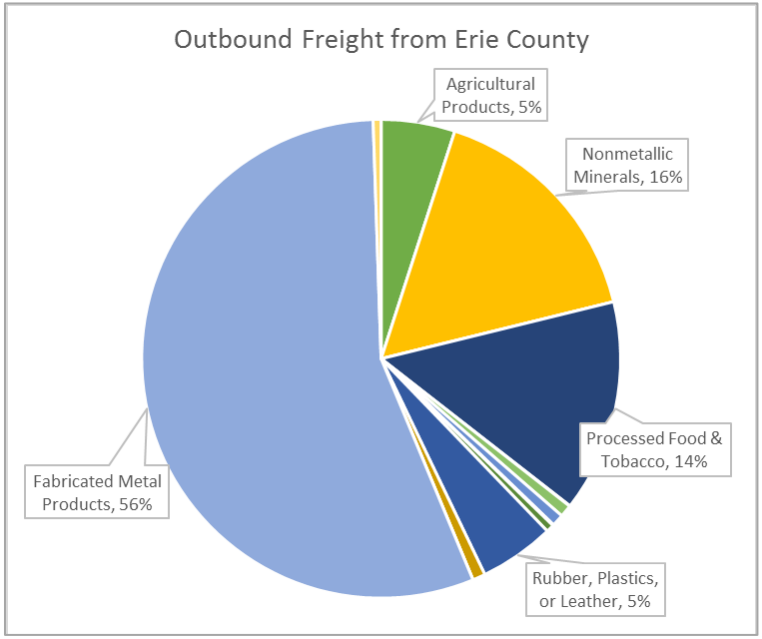
- Fabricated metal products
- Nonmetallic minerals
- Processed food & tobacco
- Rubber, plastics, or leather
- Agricultural products

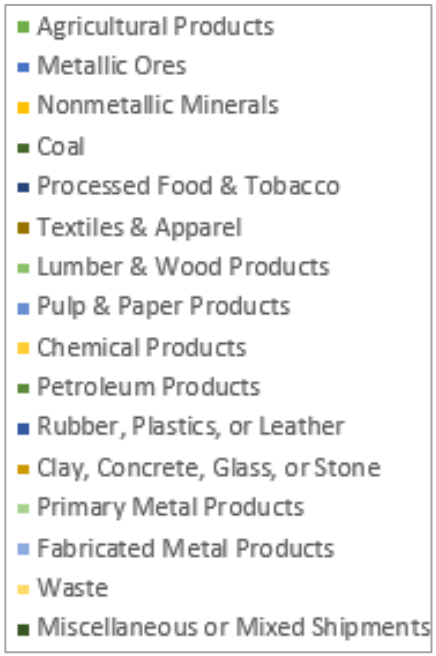
The top five inbound commodities by tonnage include:

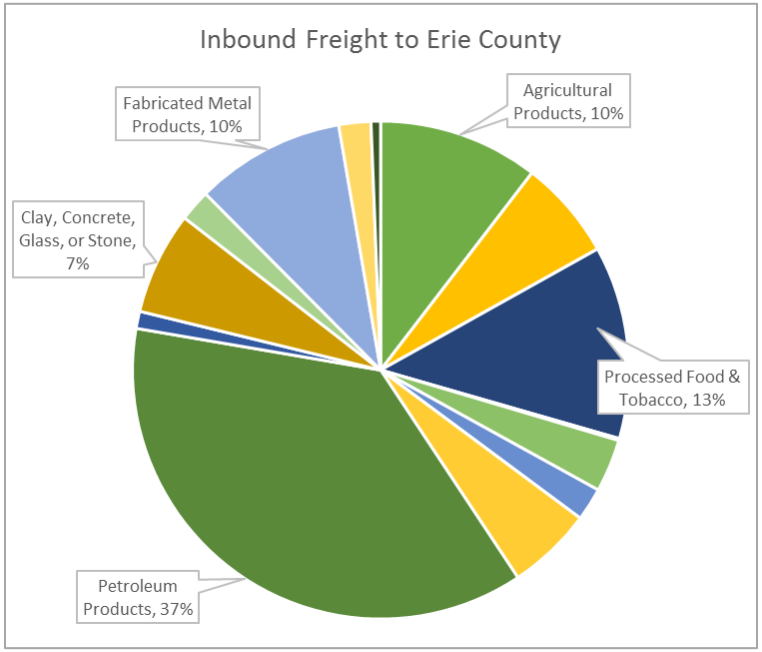
- Petroleum Products
- Processed Food & Tobacco
- Agricultural Products
- Fabricated Metal Products
- Clay, Concrete, Glass or Stone

It is important to note that the ranked commodities do not include Secondary Traffic, which makes up a large proportion of freight tonnage from Erie (33% outbound). Secondary traffic is defined as freight flows to and from distribution centers or through intermodal facilities. No commodity type is assigned to these intermediate destinations. For example, a truck carrying agricultural products from Buffalo, New York and stopping in Erie, PA to pick up or drop off goods and traveling onward to Cleveland, Ohio would only be accounted for as "secondary traffic" for Erie and "agricultural product" between Buffalo and Cleveland. Secondary traffic is often related to warehousing and distribution, parcel shipments and deliveries, and shipments of consumer goods with strong ties to retail business.

Exhibit 24 – Erie County Freight Tonnage

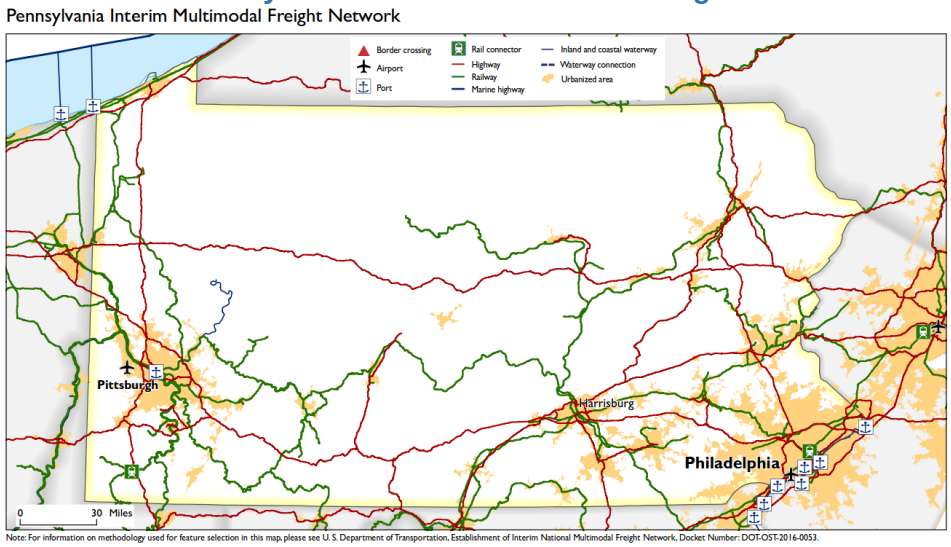






The FAST Act has identified a preliminary national multimodal freight network including rail, highway, water, and air infrastructure which was open for public comment through 2016 (Exhibit 25). Erie County's interstates and portions of its rail network are included in this proposed system, including Interstates I-90, I-79 and I-86, as well as a few railroads. This network is separate from the National Highway Freight Network. Transportation components of this network may be eligible for National Highway Freight Program (NHFP) funding. In addition to the national freight network, in the future PennDOT will be determining the Critical Urban Freight Corridors (CUFCs) and Critical Rural Freight Corridors (CRFC) network in consultation with the MPO's which will also be eligible for NHFP funding.

Exhibit 25 – Pennsylvania Interim Multimodal Freight Network



Source: US Department of Transportation, Multimodal Freight Network Map

5 - Sustainability

Sustainability is a critical federal planning factor ensuring that quality of life and environmental resources are maintained for future generations of all backgrounds. PennDOT Connects specifically requires the topic of impacts on the natural, cultural, or social environment to be discussed early in the planning process. The LRTP takes into account sensitive populations and environmental impacts and outlines mitigation measures. Early planning can help to ensure that the environment will be maintained and enhanced for all. This category includes Environmental Justice, Environmental impacts, and Health.

Environmental Justice

According to the Environmental Protection Agency, Environmental justice (EJ) is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. This means that the LRTP supports a transparent and inviting planning process for all members of the Erie community. The Pennsylvania Department of Environmental Protection (PADEP) defines Environmental Justice Areas as those having a poverty rate of 20% or greater or a non-white population of 30% or greater according to the 2010 Census (Exhibit 26).

According to the US Census Bureau the median household income in Erie County is $45,971 (in 2015 dollars), and the per capita income from the last 12 months prior to February 2017 was $24,856. There may be trade-offs in the cost of living in Erie County compared to other metropolitan areas. According to Sperling's Best Places, the cost of living in Erie is 81.5% of the national average.

From the 2010 Census, the racial composition of Erie County is as follows: White alone at 88.2%, Black or African American alone at 7.2%, Two or More Races at 2.1%, American Indian at 0.2%, Asian at 1.1%, and Hispanic or Latino at 3.4%. Erie County has a diverse minority population and a median average income near the poverty line, which reinforce the importance of considering how this LRTP would impact environmental justice (EJ) populations.

The project team held five listening tour meetings in the county at locations accessible via transit or on foot in downtown Erie, North East, Corry, Edinboro and Girard to provide convenient locations for Environmental Justice populations to provide input. The transportation survey was advertised on tent cards at public libraries to provide awareness to those who might be using public computers to access the internet. The survey was also available in paper copy at planning offices and advertised on the local public access channels.

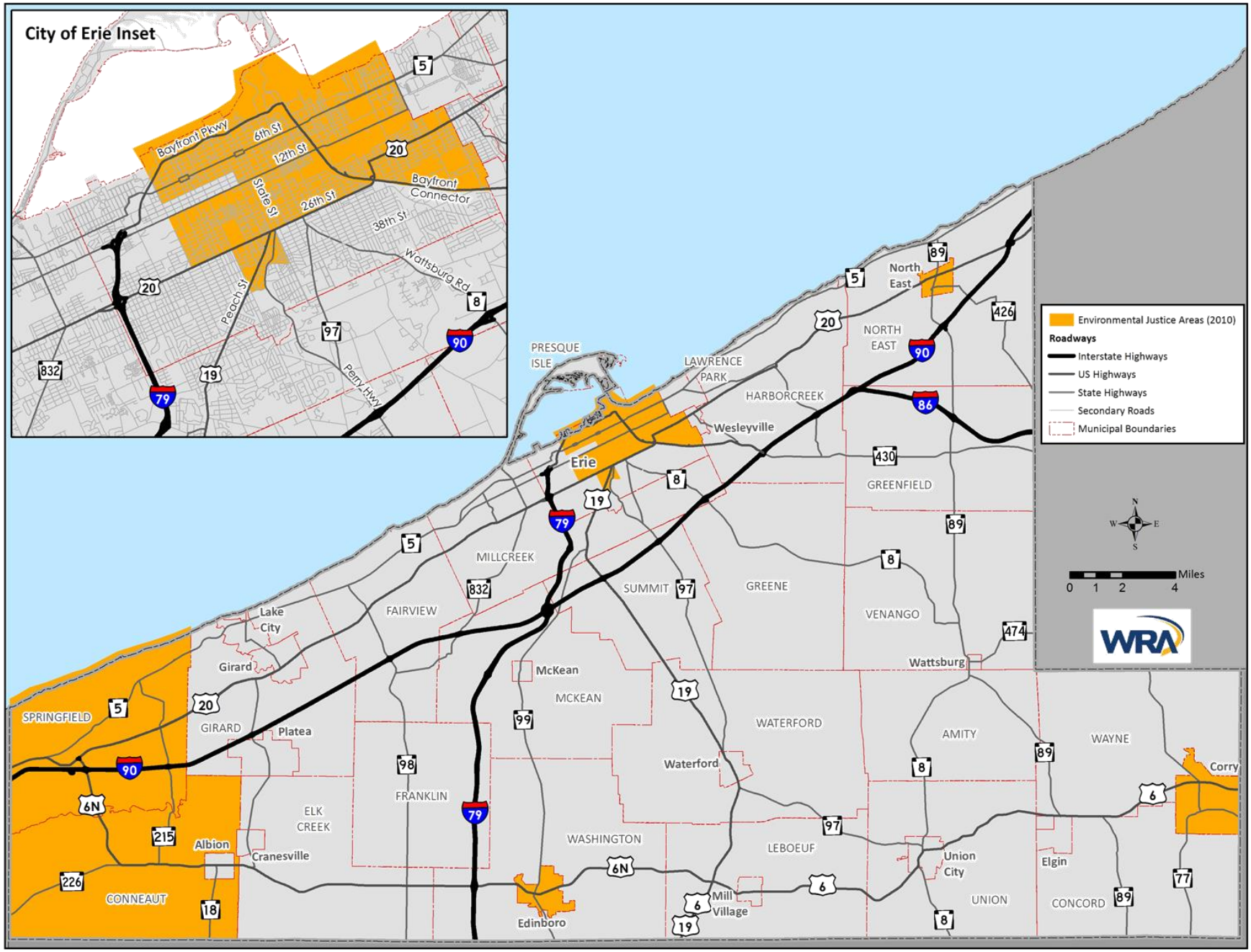
The project team met with the Greater Erie Community Action Committee (GECAC) which serves to empower individuals and families to improve their quality of life through elimination of poverty and causes of poverty. They voiced concerns over the ability of low income residents to reach their jobs. In the past, GECAC sponsored a shuttle service / carpool program, providing transportation for a few months for residents to get started at a new job until they could afford their own transportation. This was a popular program that unfortunately stopped in previous years due to funding cuts; re-establishing this program or adjusting existing transit routes to cover these gaps in the public transportation system are key goals to eliminating poverty.

Any discussion on the diverse population of Erie should note that it is a **Refugee Resettlement Area**. Refugee populations are settling primarily in the downtown core due to proximity to public infrastructure. The project team interviewed the International Institute of Erie for the US Committee for Refugees and Immigrants as a stakeholder in the planning process, and their transportation related concern was the public transportation system providing enough routes at appropriate times for shift-work for immigrant workers to get to manufacturing plants outside of downtown.

According to the Census, 6.7% of Erie households speak a language other than English at home. To ensure equitable access to the planning process, all materials related to this plan were advertised to be made available to any individual wishing to participate through free translation services with written request. It should be noted that there were no requests during the course of this plan.

Many projects, policies, and studies that are recommended by this LRTP seek to enhance safety and accessibility through sidewalk and pedestrian safety improvements, non-motorized trails, and bike lanes to provide mobility options for residents without private vehicles to access transit, schools, workplaces, medical care, and grocery stores. The prioritization scheme used in project ranking includes an EJ impact criterion. A project that helps an EJ community will rank higher than other projects.

Exhibit 26 – Environmental Justice Areas



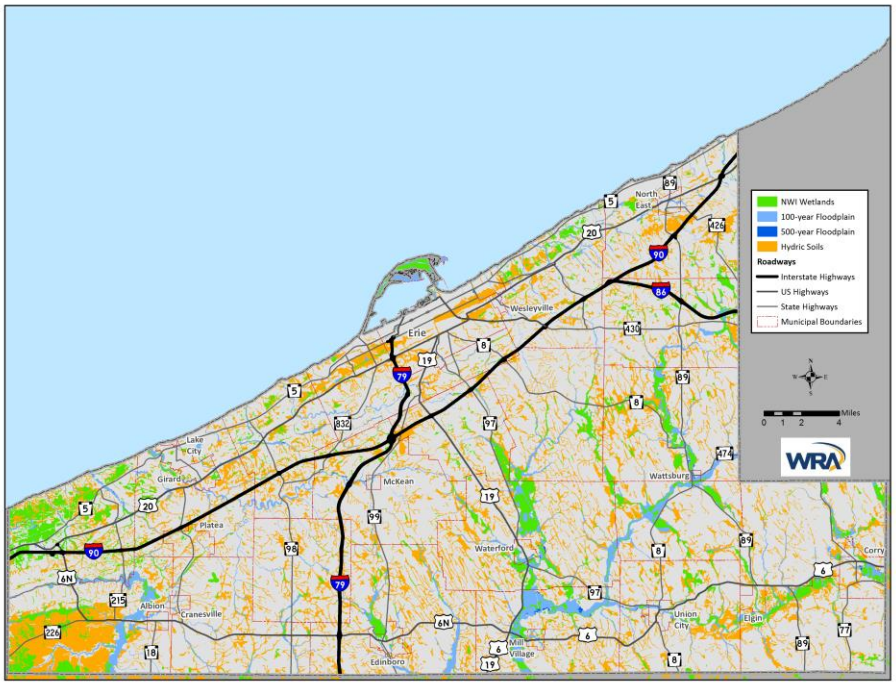
Environmental Impacts

The quality of the environment is important to preserve for current and future generations' health and enjoyment. To ensure that any potential impacts from LRTP projects were identified early in the planning process and mitigated, the project team participated in an Agency Coordination Meeting with PennDOT, the Pennsylvania Department of Conservation and Natural Resources (DCNR), Pennsylvania Department of Environmental Protection (PADEP), the Pennsylvania Fish and Boat Commission (PAFBC), United States Fish and Wildlife Service (USFWS), Pennsylvania Museum and Historical Commission (PMHC), and other environmental agencies to review the impacts that the projects recommended by the LRTP and those programmed already through TIP, TYP, and DOI may have on environmental resources.

The purpose of the meeting was to open channels of communication early and get the multi-disciplinary agencies on common ground to identify how impactful the projects might be on a variety of environmental features as well as mitigation measures to reduce and offset project impacts. Impacts were tabulated using PennDOT's Linking Planning to NEPA (LPN) and Pennsylvania Natural Heritage Inventory's Conservation Explorer (PNDI) forms, as well as a suite of geospatial environmental layers from various agencies (Exhibit 27). These can also be found in Appendix F.

Important considerations in Erie County regarding the environment are to maintain critical habitat for threatened, endangered, and sensitive species of birds, fish, plants, and animals; to preserve the excellent environmental quality of French Creek and its tributaries and preserve mussel species within; to ensure that open space is preserved in floodplains; adequate setbacks from the Bluffs; important bird areas at Presque Isle and habitat at the northern border of the Erie Wildlife Refuge just south of the county line; and to pursue wetland banking to offset impacts to wetlands. The group expressed the need for more public access to water trails and streams and education on eco-tourism opportunities available, as well as methods to enhance stewardship of the water and land.

Exhibit 27 – Environmental Layers - Wetlands



Environmental Mitigation

Environmental mitigation strategies for the projects recommended by this LRTP were discussed at the January 25, 2017 Agency Coordination Meeting with PennDOT at the PennDOT District 2-0 office in Clearfield, PA which can be found in full in Appendix F. The strategies discussed to mitigate potential environmental impacts from the LRTP involve early identification of potential impacts to the environment and communities, tracking threatened and endangered (T&E) species, coordinating with agencies early on project locations, providing multimodal access, and implementing stormwater and erosion control measures throughout the county.

Specifically, PennDOT's Linking Planning & NEPA (LPN) system will be used to identify potential impacts of projects early in the conceptual design process so that agencies can be contacted to review and comment on strategies to reduce negative impacts.

Threatened and endangered species impacts will be mitigated appropriately per the Pennsylvania Fish and Boat Commission (PFBC), Department of Conservation and National Resources (DCNR), and US Fish and Wildlife Service (USFWS). Tracking species such as the Indiana bat, Northern Long-Eared bat, Bald Eagle, and other sensitive species of plants, fish, and animals will aid in identifying potential impacts.

Lake Erie's tributaries are home to migratory fish. These waters, along with trout stocked and wild trout streams, carry an instream restriction which can impact construction schedules. The Mussel Programmatic Agreement with USFWS and PFBC should continue to protect T&E Mussels in French Creek and its tributaries. PFBC and PennDOT support coordination on highway and bridge to investigate potential for easements for public access to streams.

Wetland banks can be used to mitigate project impacts to wetlands. The wetland bank for the Lake Erie Watershed and the French Creek/Allegheny Watershed are currently with capacity; as such, there is no need to pursue additional wetland banking sites at this time.

The project sponsor will work with Pennsylvania Museum and Historical Commission (PMHC) to identify key cultural and historic resources, as well as archeological sites, and implement advanced mitigation strategies as necessary. Consideration should be given to decommissioned historical bridges for repurposing to parks and bicycle and pedestrian trails. All projects should avoid negative impacts to public parks and State Gamelands.

Stormwater management and erosion control will be addressed by coordination with the Conservation District, maintaining erosion control on construction sites, maintaining the existing stormwater systems, training municipalities, and preserving open space in floodplains.

Multimodal connectivity will be improved to bring awareness of environmental issues to the public eye and to reduce vehicular emissions and noise, and minimize impact of climate change by meeting EPA emissions budgets through the travel demand forecasting and air quality conformity process.

There are no projects on the LRTP project listing that will likely be burdensome to EJ populations. The projects that did affect EJ populations were generally positive in nature. Erie MPO will conduct public outreach and host meetings on projects to ensure equitable access to the planning process to involve EJ populations early and throughout the process to identify and mitigate any potential impacts.

Health

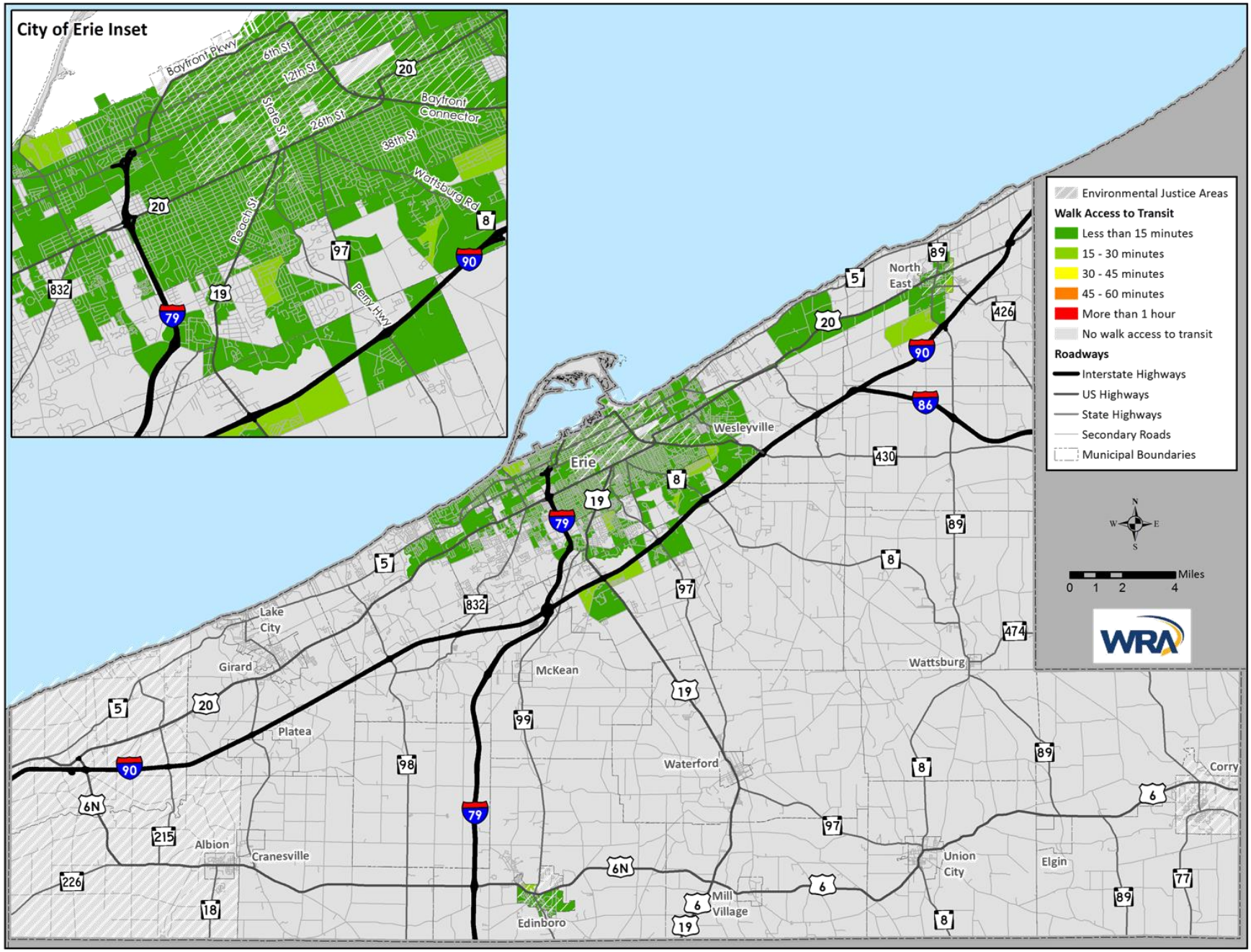
The transportation system plays a vital role in providing accessibility, mobility, and recreation options for its residents which may influence community health outcomes. In 2015, a group of local health experts and community members completed an update to the Erie County Community Health Needs Assessment (CHNA). This document is publicly available through the **Erie County Department of Health** website. The CHNA identified the number one health concern in Erie as obesity, with a rate of 32% in 2011-2013 which is higher than the State and Federal rates of obesity for the same time period (29% and 28% respectively); other health concerns were substance abuse, financial distress, diabetes/pre-diabetes, and alcohol abuse.

According to the CHNA, diseases of the heart, including heart attack and chronic heart disease, was the leading cause of death for years 2009-2011 while stroke was fourth. Risk factors for these diseases are associated with inactivity, obesity, high blood pressure, cigarette smoking, high cholesterol, and diabetes.

The non-motorized transportation system of interconnected sidewalks, paths, bicycle lanes, and trails provides mobility options for the public to encourage healthy activities such as **active transportation** to work, shopping, school, healthcare, recreation, and other purposes. Supporting projects and policies that encourage the preservation and expansion of the multimodal transportation system serve to improve Erie's public health while enhancing mobility and the local economy.

Public transportation such as EMTA's fixed route **transit system** "the E" and paratransit "the E Lift" can help people access jobs and healthcare. The first- and last-mile connections to fixed-route transit are often accomplished through walking or cycling, which provides physical activity that may reduce the risk of obesity, diabetes, high blood pressure, dementia, and depression. Accessibility via sidewalks to transit are shown in Exhibit 28. Although many people may walk along low-stress rural routes without sidewalks, this analysis considers **sidewalks** only, as they provide refuge for the most vulnerable populations such as those with limited mobility, disabled, children, and the elderly. A drawback to the data available through aerial photography is that it identifies only "sidewalk" locations, and does not include any information on Americans with Disabilities Act (ADA) compliancy (such as compliant curb ramps, sidewalk slopes, detectable warning surfaces) or condition (such as tree roots, grass, heaving or uneven sidewalks). North East Borough undertook a **sidewalk inventory** as part of its Smart Transportation Initiative plan in 2014 which identified sidewalk conditions on each borough block, showing areas in need of attention and providing a baseline for comparison in the future and decision making. Other municipalities in Erie County could undertake similar efforts to identify their sidewalk condition, to establish the data needed to prioritize them for upgrade and repairs.

Exhibit 28 – Accessibility to Daily Transit Service via Sidewalks



The CHNA identified **unhealthy diets** as a key health problem in Erie. The self-reported percentage of Erie County adults who eat fruits and vegetables five or more times per day decreased to 10% in 2011, which is lower than the state of Pennsylvania at 15% and nationwide at 24%, according to information gathered from the Center for Disease Control's Behavioral Risk Factor Surveillance Survey.

The transportation system provides access to supermarkets and fresh produce. A **food desert** can be described as a geography where there is limited access to healthy or affordable fresh produce and food options. An analysis of food deserts was performed to illustrate areas in need of improved accessibility to grocery stores as part of the CHNA; this identified ten food deserts in Erie County by Census Tract, all of which are either low-income or low vehicle access areas.

For the purpose of the long range transportation plan, smaller areas of analysis are needed than Census Tract in order to evaluate how transportation improvements can improve accessibility. The Erie Travel Demand Model's fine traffic analysis zone structure was used to identify which zones are **accessible to grocery stores via sidewalk** in a 15-minute interval heat map. This map should be used as a **needs identification**, showing that while many Environmental Justice (EJ) areas have access to stores of varying size, quality, and price, they lack the large, affordable supermarkets such as those found on Peach Street. Erie's impoverished, minority, and refugee populations in these EJ areas are particularly at risk of health distress as noted in the CHNA. Exhibits 29-32 show accessibility via sidewalks to grocery stores, hospitals, schools, and parks with EJ areas overlaid.

These maps should be used as a starting point for conversation on how to approach and begin fixing these issues. A key recommendation of the LRTP is to establish a **multimodal transportation and health committee** made up of a multi-disciplinary team of planning, health, and transportation professionals. The committee should meet regularly to discuss current issues with health and the transportation system and examine how targeted multimodal transportation investments can affect health, mobility, and quality of life; the group should prioritize corridors, establish public-private partnerships and identify funding sources in order to champion and deliver projects. This will allow the group to gain momentum and visibility to raise awareness of the transportation-health linkage and help Erie residents achieve a fuller, healthier lifestyle.

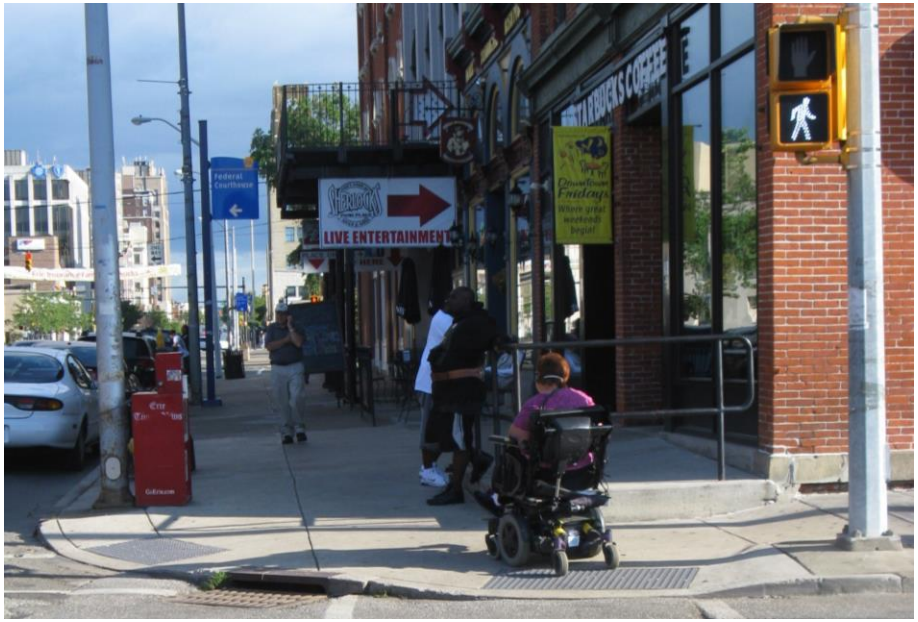


Exhibit 29 – Accessibility to Grocery Stores via Sidewalk

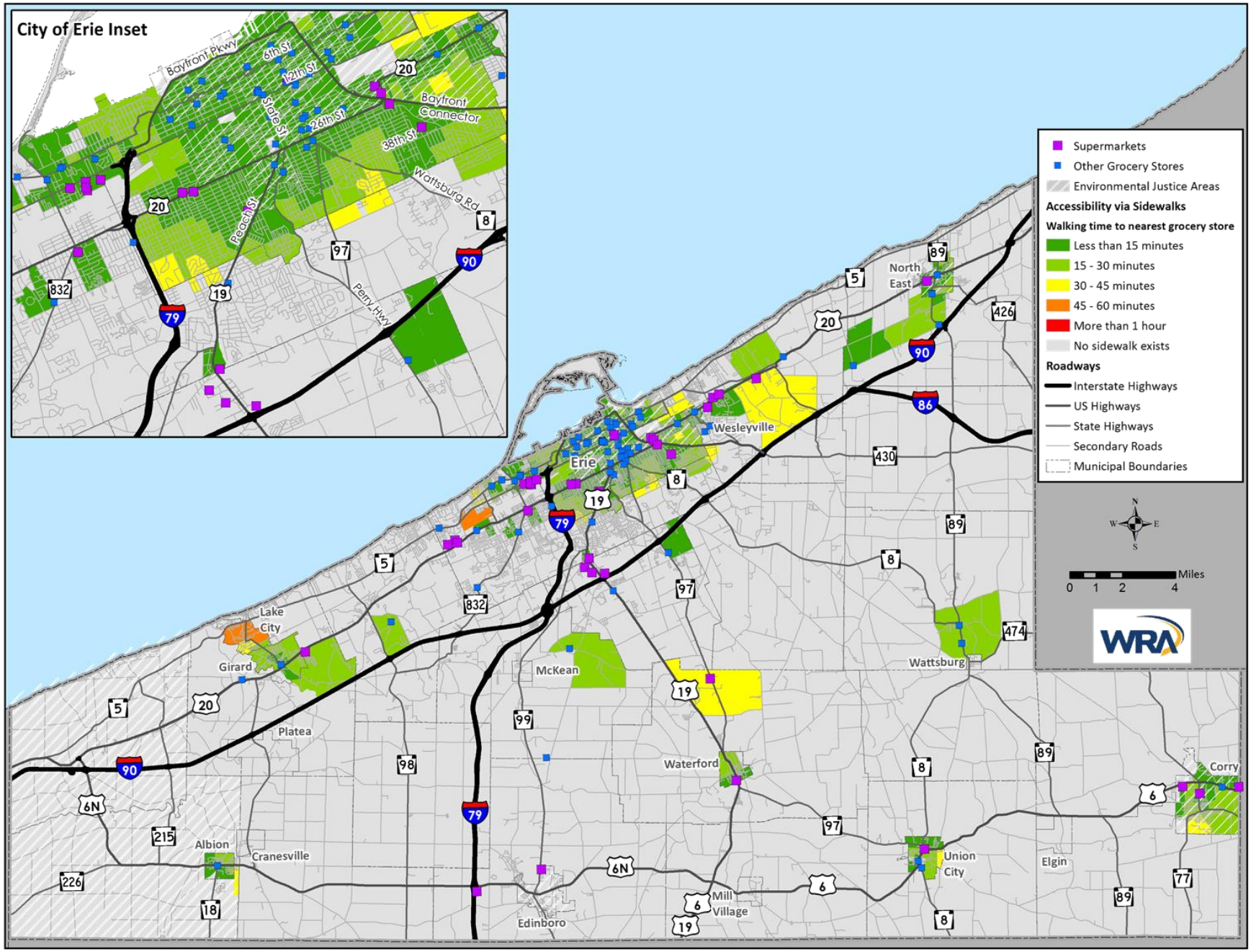


Exhibit 30 – Accessibility to Hospitals via Sidewalk

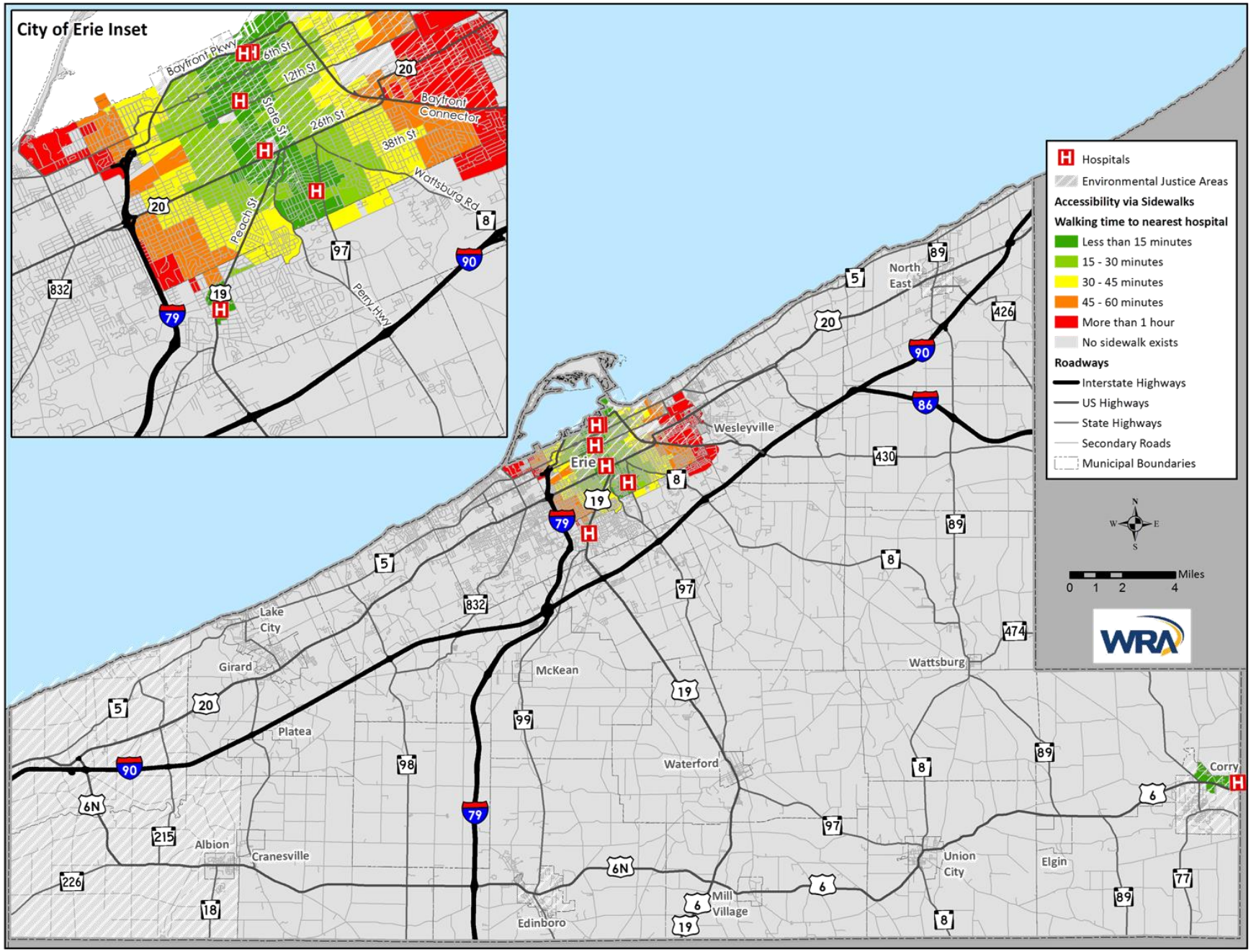


Exhibit 31 – Accessibility to Schools via Sidewalk

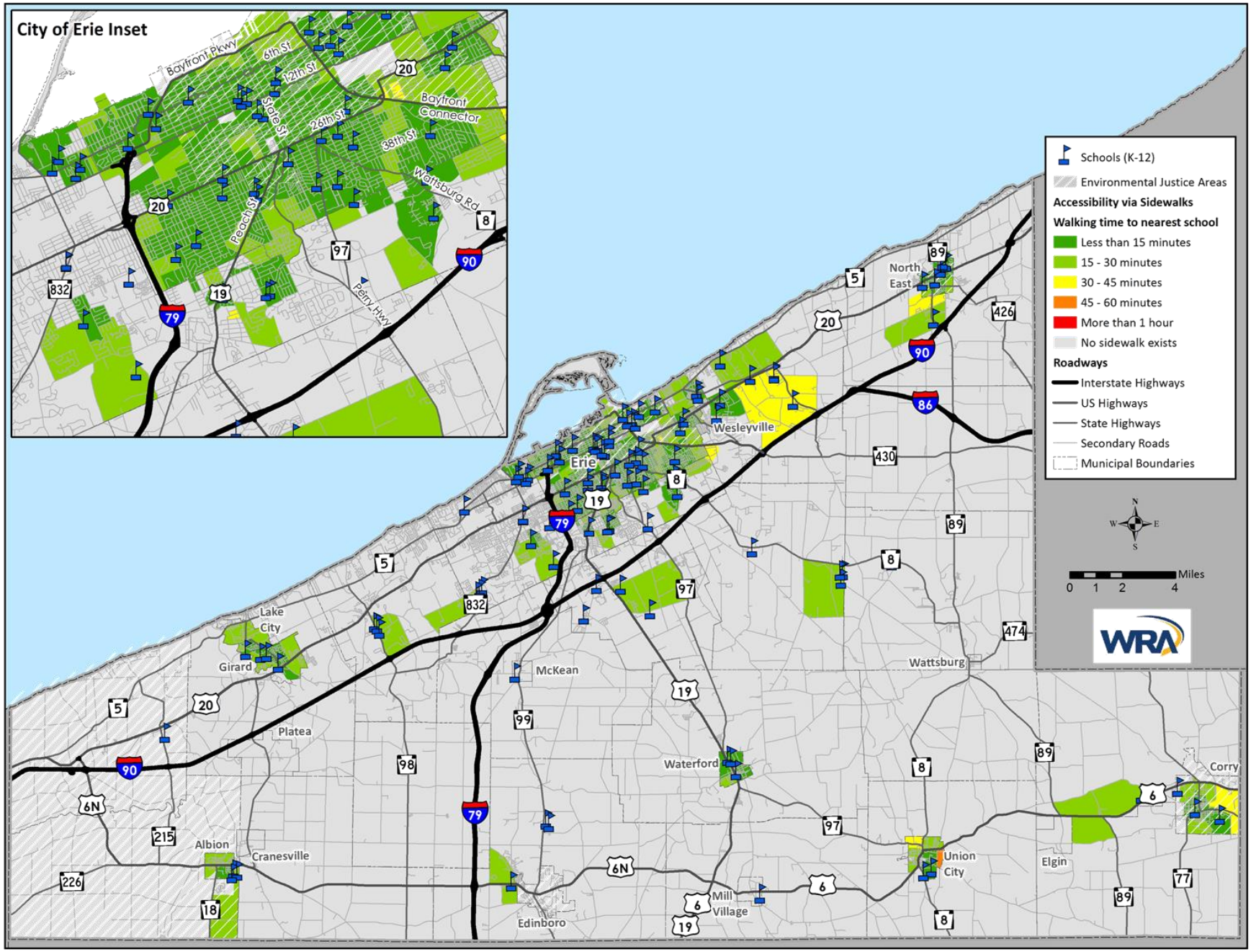
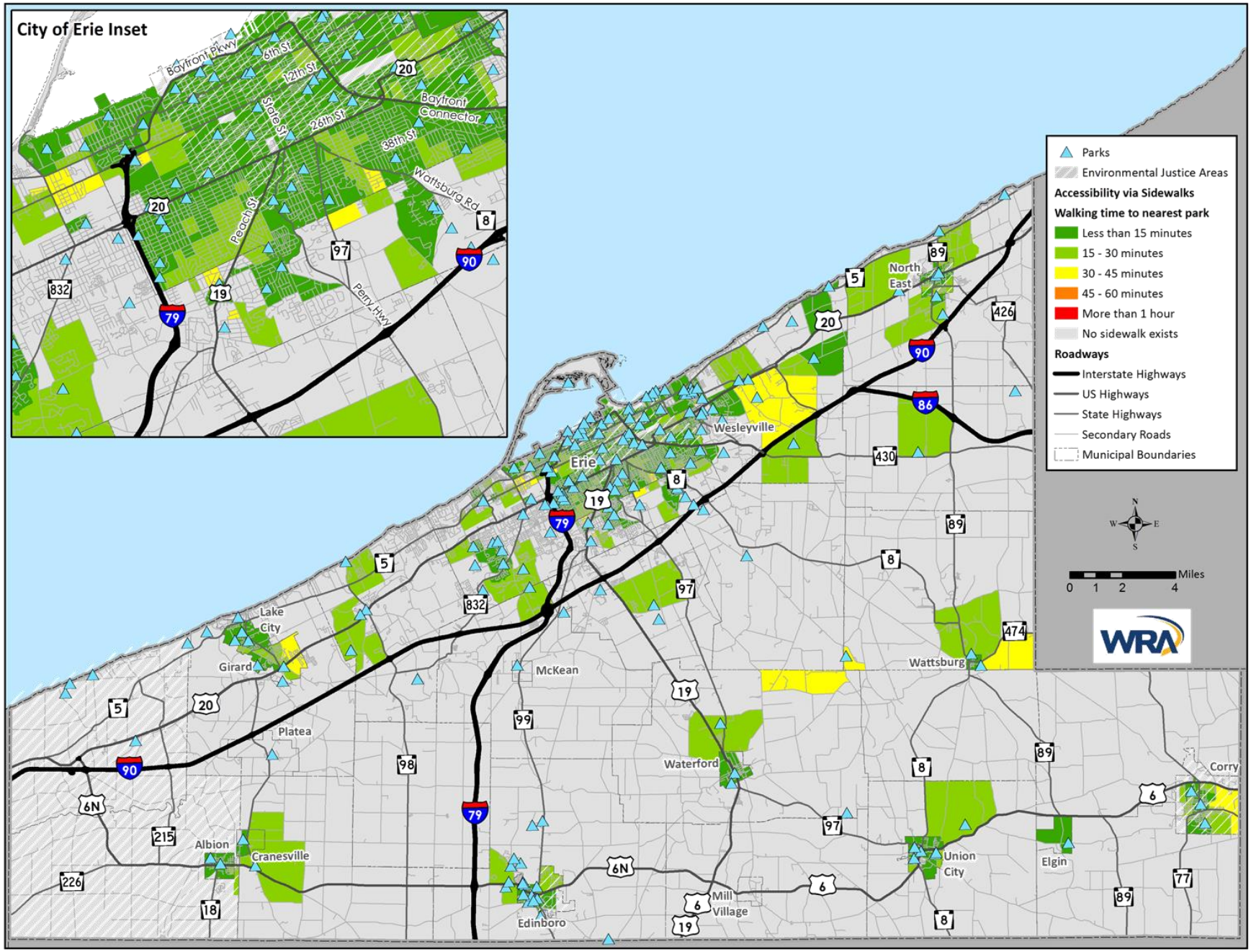


Exhibit 32 – Accessibility to Parks via Sidewalk



6 - Project Feasibility

Project feasibility is a new area of local focus for the 2017 LRTP update. This category aims to ensure that the MPO advances projects that support the goals and objectives of the community. PennDOT Connects requires early collaboration between officials and the public on projects regarding utility issues, right-of-way considerations, and consistency with local and regional planning studies. This helps to ensure that project likely has a champion in the community who is willing to advance the project into programming. To understand public support for projects, the project team reviewed planning studies, conducted extensive public outreach, and interviewed municipal officials and stakeholders.

Planning Studies

The project team undertook a literature review of plans completed since the 2012 LRTP as an initial way to identify supported projects (Exhibit 33).

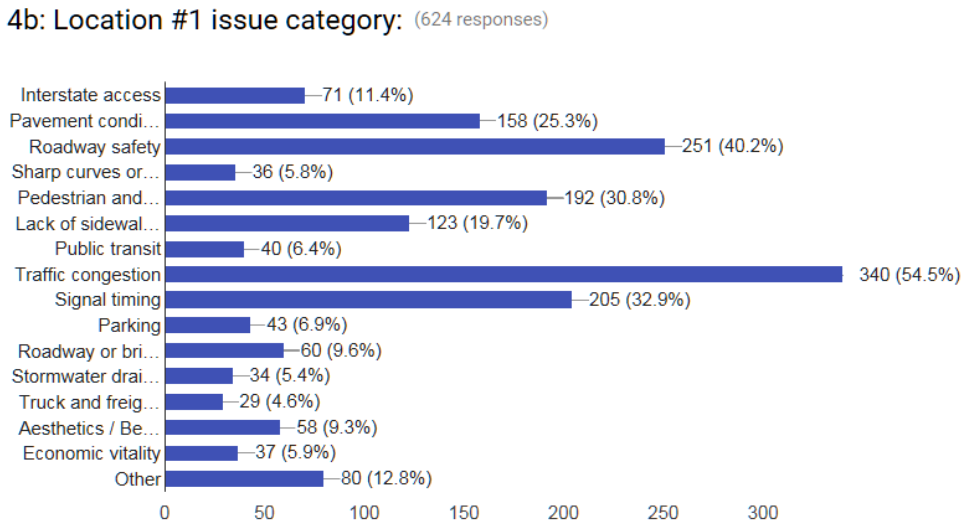
Exhibit 33 – Literature Review

Title	Year
Erie Long Range Transportation Plan	2012
Erie Refocused: Comprehensive Plan and Community Decision-Making Guide	2016
Erie Downtown Master Plan	2016
Our West Bayfront Community Plan (Draft)	2016
Erie Hazard Mitigation Plan	2012
District 1-0 Report Card	2016
Erie Downtown Streetscape Master Plan	2010
Destination Erie	2015
North East Smart Transportation Initiative	2014
Bayfront Parkway Study (Draft)	Draft
US DOT Indicators	2015
Waterfront Master Plan	2009
Depot Road Study	2015
PA Route 6 Master Plan Design Guide	2016
Moving Forward Along Route 6	2016
EMTA Transit Shelters	2016
Erie County Community Health Needs Assessment	2015

Public Outreach

Early public involvement is a critical part of PennDOT Connects planning policy, ensuring that communication and collaboration happens as part of project conception to avoid costly changes later in later project phases. As discussed in Chapter 1, the project team conducted a transportation survey to gather information on the public's concerns, prompting them to discuss specific roadways and intersections. The responses were mapped and analyzed to identify trends to determine potential improvements (Exhibit 34).

A common trend in the comments was congestion-related frustration with outdated traffic signals and missing turn lanes, poor roadway condition and potholes, intersections with skewed approaches and poor sight distance, gaps in transit schedules and routes, and general safety concerns for pedestrians and cyclists. With Erie being a recreational hub with record-breaking yearly snowfall, its residents make the most of the warm summer weather by getting out and being active, even if that means walking or cycling along a local road. Many people support safety improvements for pedestrians and cyclists, providing refuge and separation from the general flow of traffic.



Location #1 issue category summary (self-reported) from Public Survey 2016

Exhibit 34a – Public Survey Areas of Concern (Countywide)

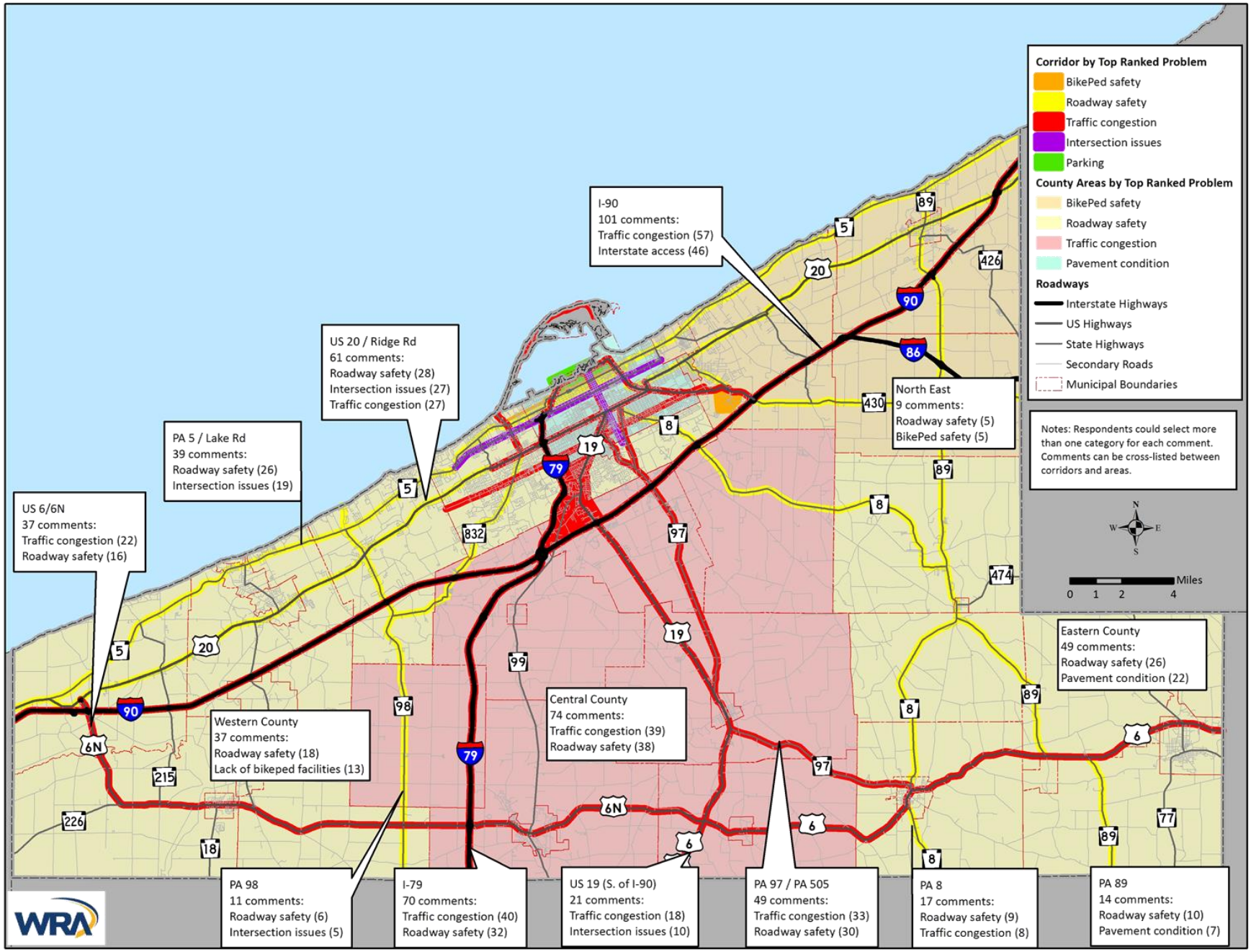
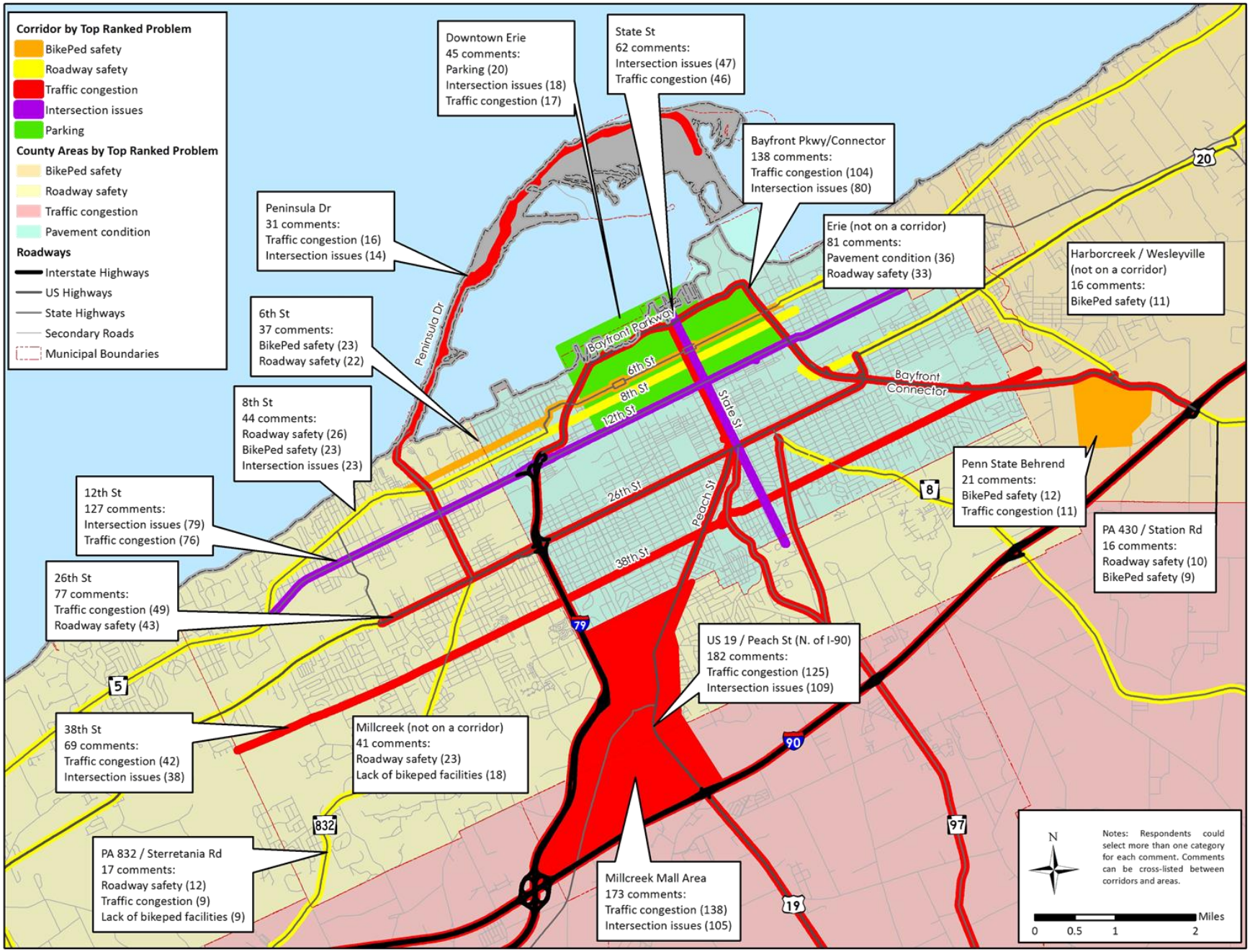


Exhibit 34b – Public Survey Areas of Concern (Downtown)



7 - Congestion & Maintenance

Across the state and nation much of the transportation network is reaching the end of its design life span. This means that the roads, bridges, and other infrastructure we rely on is quickly deteriorating and as time passes the effects of this will become more apparent with bridge closures and crumbling pavement. The amount of resources needed to preserve this infrastructure is greater than ever before, yet revenues available are historically low. With these considerations, a goal of the LRTP is to leverage existing revenues to best address the needs of the transportation system through proper asset management. This LRTP therefore includes an important focus on system efficiency and preservation in terms of:

- Pavement / Highway Maintenance
- Bridge Maintenance
- Traffic Signal Systems

Exhibit 35 shows PennDOT District 1's TIP investment for Erie by project class for three categories: roadway which encompasses pavement and highway maintenance and traffic signal improvements, bridge maintenance and bicycle/pedestrian projects.

Pavement Quality

PennDOT assesses pavement surface conditions using a variety of metrics that include International Roughness Index (IRI). IRI is a world-wide standard to measure pavement roughness in terms of the number of inches per mile that a laser, mounted in a specialized van, jumps as it is driven along a highway – the lower the IRI, the smoother the ride. Scores for the metric are grouped into ranges to define pavement conditions as Poor, Fair, Good, or Excellent. According to PennDOT District 1-0's Annual Report Card for 2016, Erie County's average IRI was 107 overall and 58 for interstates (Exhibit 36).

District 1-0 is ranked #1 in the state in pavement quality (IRI) for 13 of the past 16 years. Erie County's performance metrics are even better than its district averages. The statewide average for IRI is 144, while PennDOT District 1-0 is 131, and Erie County has an IRI = 107 and 58 for Interstates.

Exhibit 35 – Erie TIP Maintenance Investments

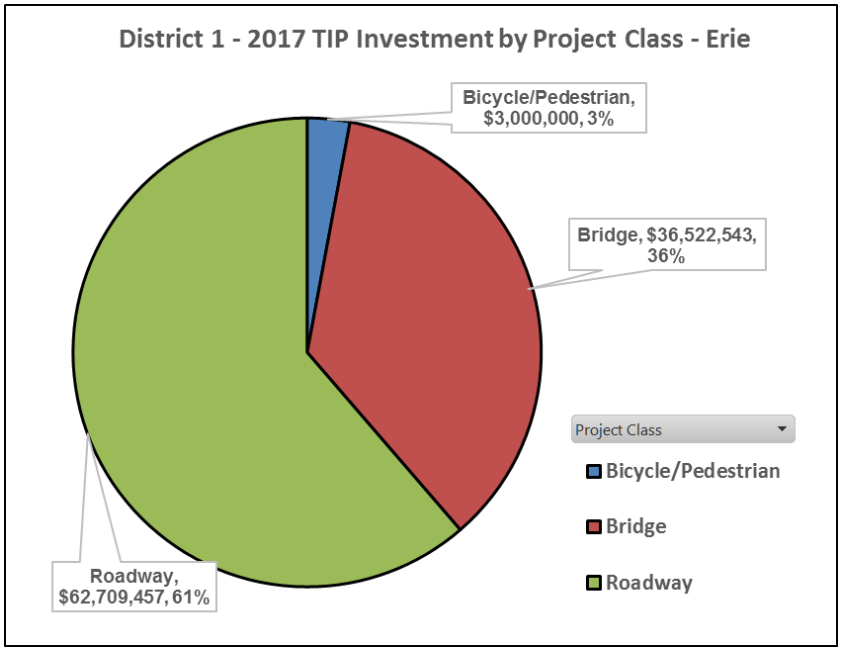


Exhibit 36a – Erie County Pavement Condition (IRI)

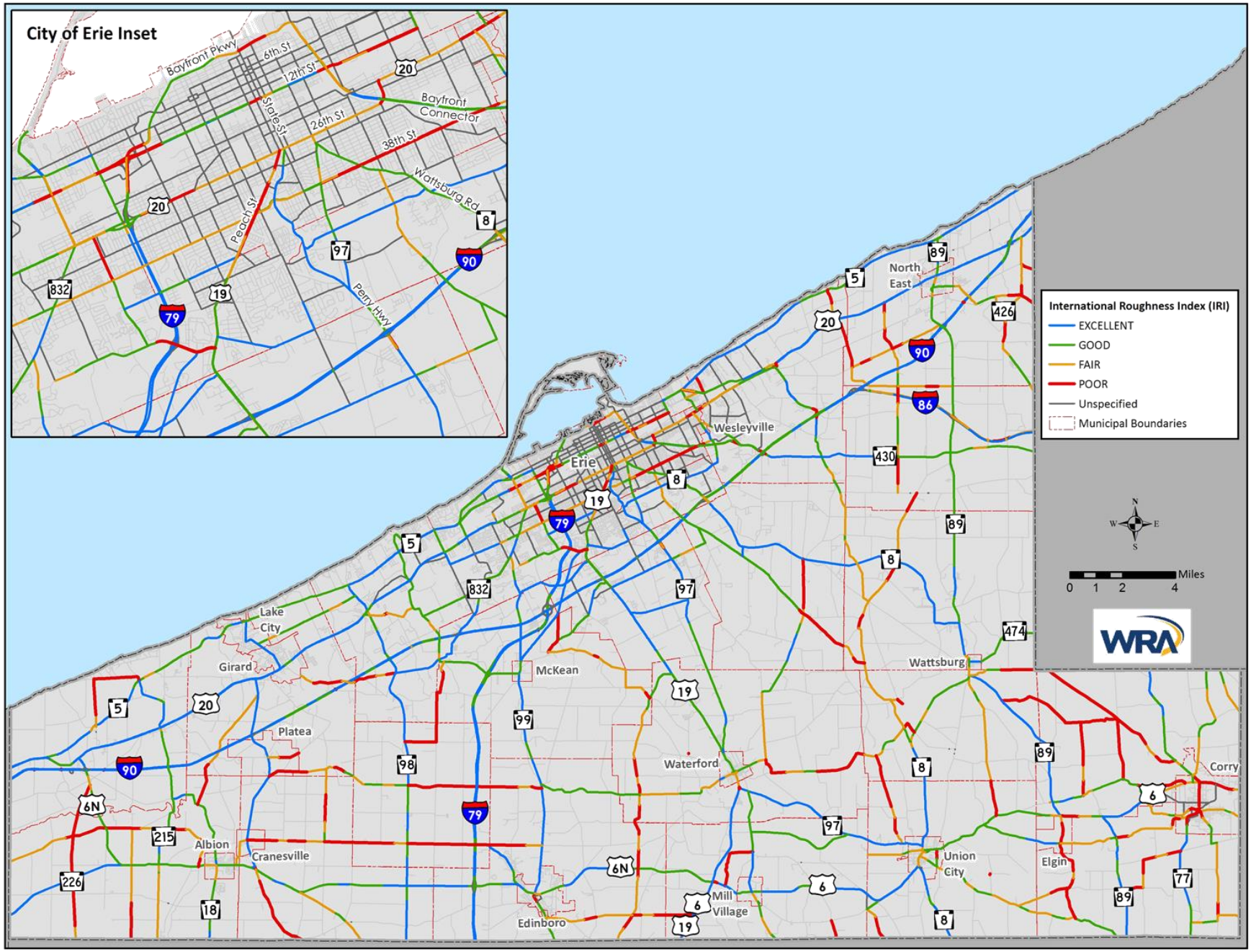
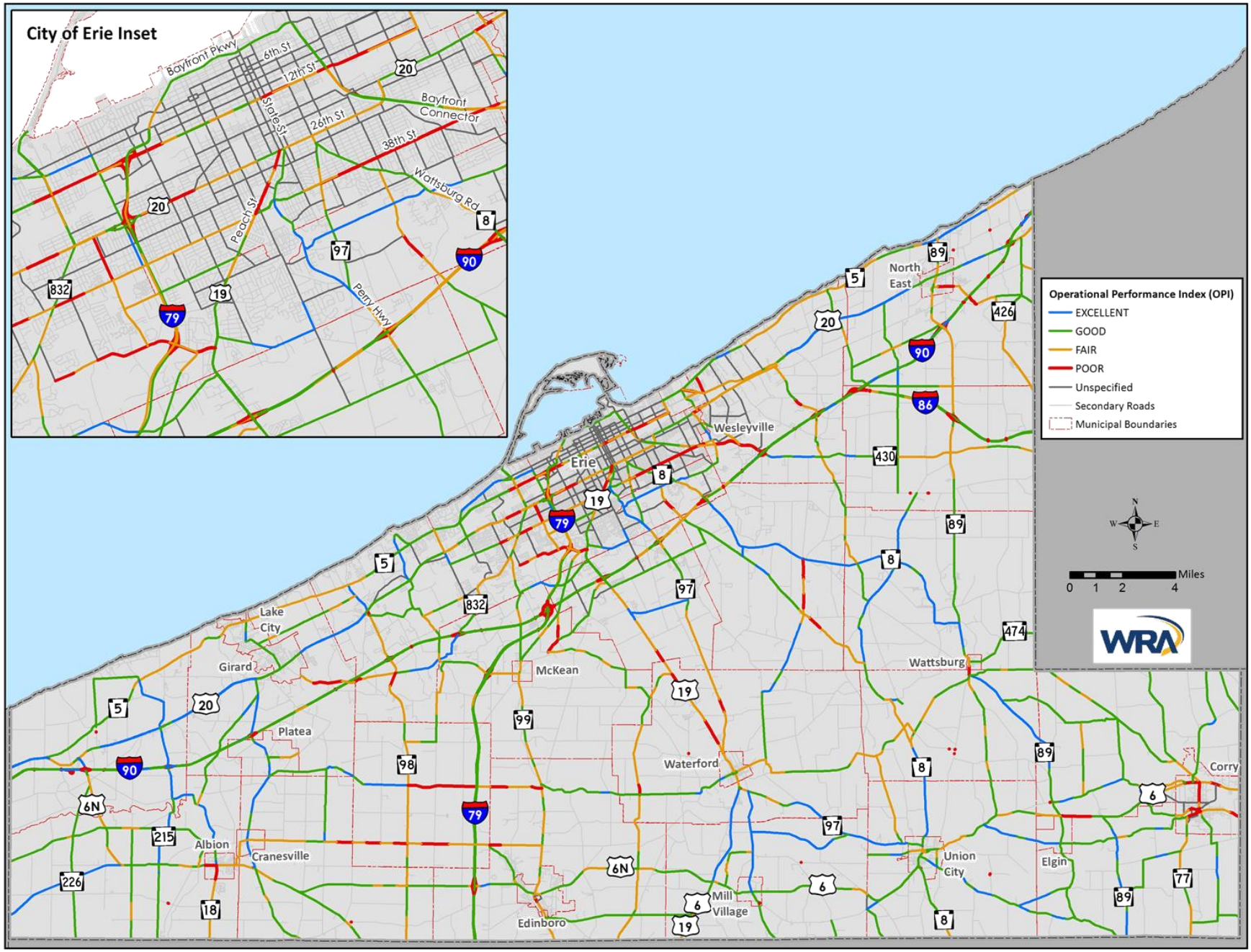


Exhibit 36b – Erie County Pavement Condition (OPI)



Bridge Quality

PennDOT maintains an overall Asset Management Plan philosophy that aims to ensure that correct treatments are being performed at the correct time for candidate bridge projects selected for preservation, rehabilitation, or replacement, and for candidate highway projects selected for betterment or resurfacing. This type of proactive approach will help to target the right solution in the right area, verify that the state's financial guidance requirements are being fulfilled, and improve project compatibility and success through the Linking Planning and NEPA screening process and the TIP.

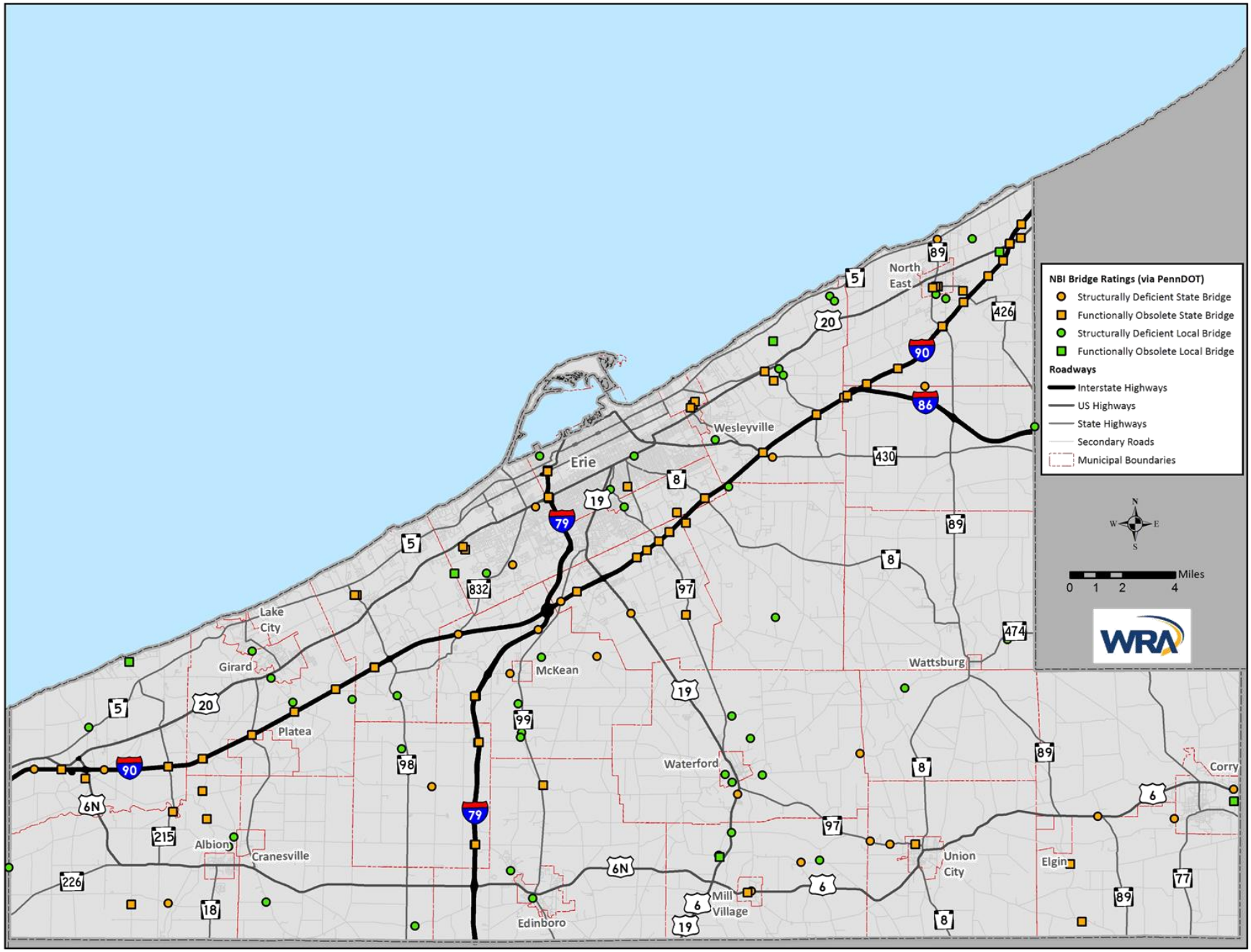
PennDOT defines a Structurally Deficient (SD) bridge as a bridge where one or more major components are in poor condition. As of the end of 2016, Erie County performed better than the statewide average in terms of the percent of state-owned SD bridges, but poorer than the statewide average in terms of local SD bridges:

- Approximately 4.3% of all Erie County state-owned bridges are structurally deficient (25 out of 577), compared to 21% statewide (5,310 out of 25,325).
- Approximately 37.2% of all Erie County local bridges are structurally deficient (44 out of 118), compared to 34% statewide (2,164 out of 6,318).

Selection and prioritization of candidate bridge projects is performed internally by PennDOT for bridges on the state system, and should be prioritized by the Erie MPO for those owned by the local municipalities.

Exhibit 37 shows the location of functionally obsolete and structurally deficient bridges in the county. An important current consideration in Erie is the amount of functionally obsolete bridges over the railroad tracks and interstates, particularly noticeable along I-90, as a majority were not designed to current interstate bridge height standards, carry relatively low traffic volumes, and will be reaching their design life span in the next 50 years.

Exhibit 37 – Erie County Bridge Condition



Traffic Signal Systems

Traffic signal systems are of particular importance in Erie due to the sheer number of signalized intersections, and those that are operating without updated equipment that can reduce user delay and improve response. Approximately 353 traffic signals and 27 flashing beacons operate throughout Erie County. Well over half of these signals (202) are located within the City of Erie, and a majority of the remainder can be found in the immediately adjacent urbanized areas (Exhibit 38).

According to the public survey, traffic congestion is the number one most reported area in need of improvement in Erie County. Since the last LRTP update, Erie County undertook an extensive signal inventory to catalog equipment condition and identify potential improvements. In general, the traffic signal infrastructure throughout Erie County is outdated and requires substantial investments to help reduce delay and improve operating efficiencies and mobility:

• Only 19% of the county's signals currently operate as part of a coordinated traffic signal system. Several of these existing systems are fairly small (3-4 signals each), do not span gaps that would otherwise allow for larger, more continuous systems, or could benefit from improved communications capabilities.

• Notable coordinated system gaps exist along major corridors such as 12th Street, 26th Street, Peach Street, US 20 in Harborcreek, and the City of Corry.

• Critical intersections may benefit from additional turn arrows and corresponding signal phasing modifications.

• Approximately 15% of the county's signals operate with aged or electromechanical equipment in need of upgrade, replacement, or in some cases removal.

• Some of the oldest equipment in the county is located along the State Street corridor through the center of downtown Erie. Several signals along the West 38th Street corridor, particularly east of State Street, are also in need of improvements.

• The age, poor condition, and outdated technology of the emergency vehicle traffic signal preemption system impacts emergency response time.

• The 2004 Downtown Erie Access and Circulation Study identified 33 intersections out of sample of the City of Erie's signals as candidates for traffic signal removal, and projected that a third of all signals in the City may be candidates for removal. The study also noted that the removal of these signals would provide a total savings of over $490,000 per year.

The Travel Demand Model (TDM) for the LRTP has greatly enhanced capabilities with regard to signal operations. The county's TDM explicitly accounts for the intersection approach and turning movement delays that occur at each traffic signal based on a realistic set of traffic signal timing, phasing, and related operating assumptions. As such, the TDM better reflects and quantifies the potential impacts of adding, removing, or modifying traffic signals or traffic signal operations throughout the transportation network. Such capabilities will allow Erie County and its partner agencies to take a more comprehensive preliminary look at the overall effects of traffic signal system modifications that may address any of the issues or concerns identified above.

Exhibit 38a – Erie County Traffic Signals

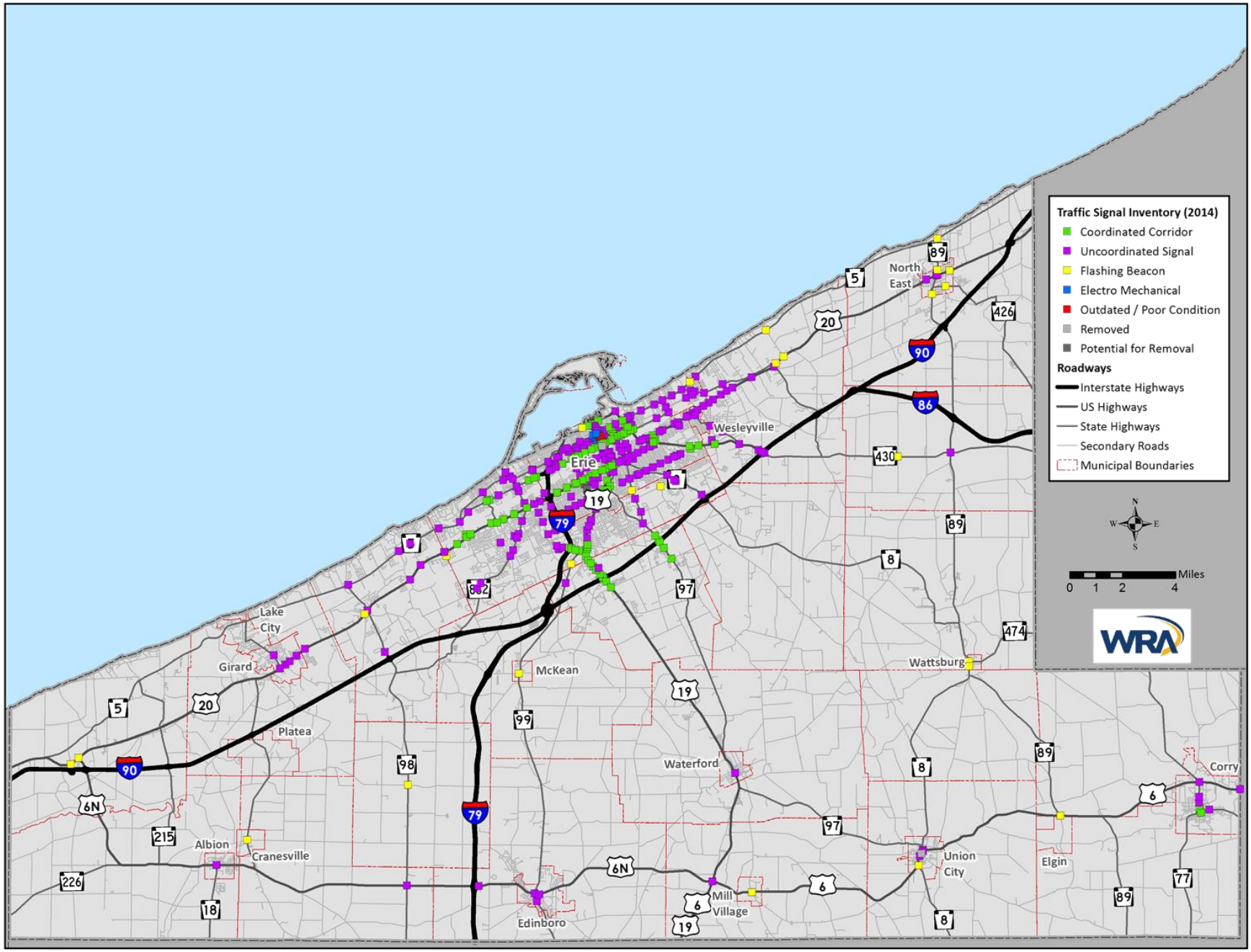
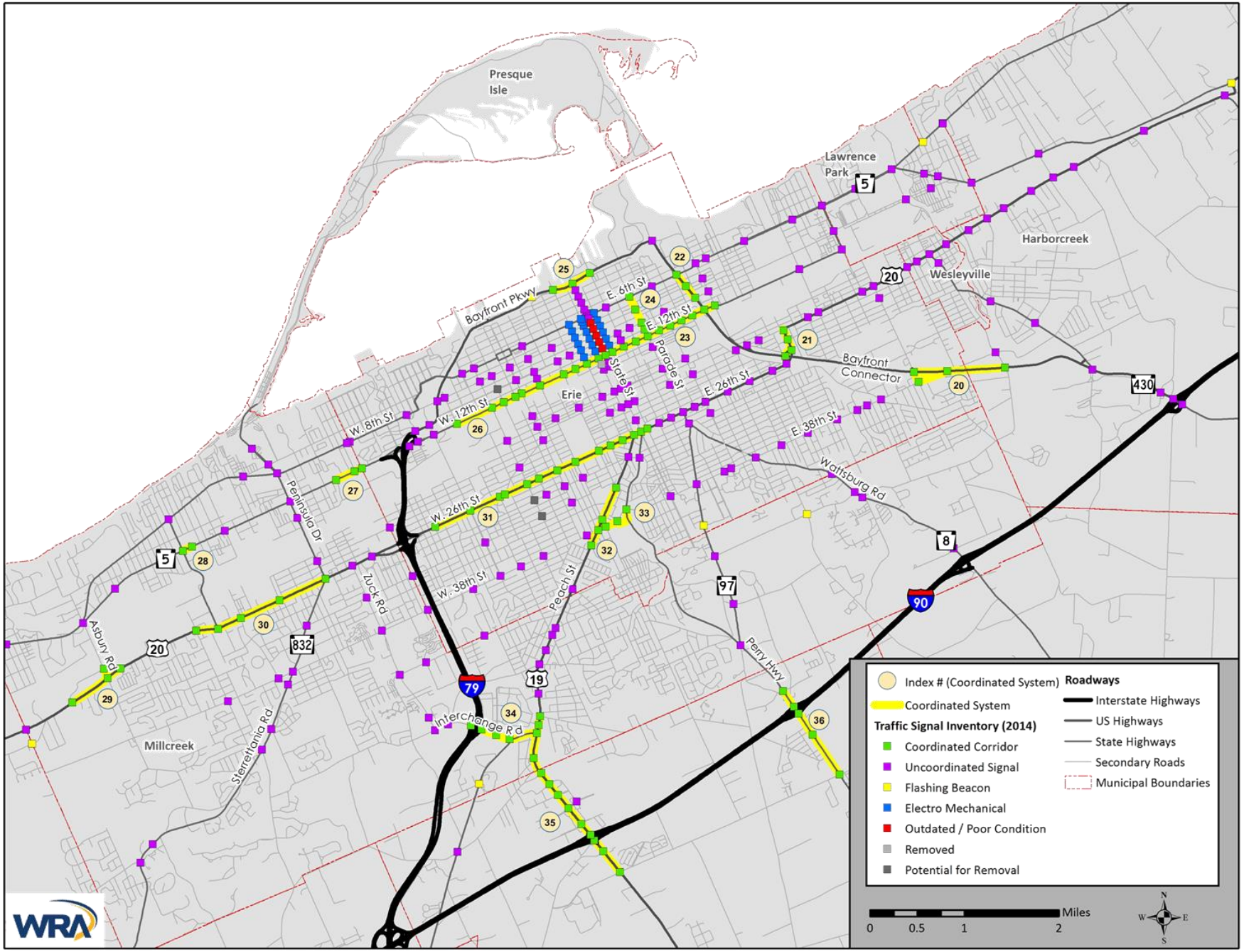


Exhibit 38b - Traffic Signals (Downtown)



Stormwater

Stormwater is one of the two new Federal planning factors introduced by the FAST Act. PennDOT Connects requires stormwater management concerns to be discussed during early project collaboration. Stormwater management and infrastructure maintenance are key components of a reliable and safe transportation system. This is especially true in Erie County due to its proximity to lakes and stream; it has a vested interest in stormwater management.

Standing water on the roadway creates hazardous conditions for drivers and can lead to ice patches in the winter and hydroplaning in the warmer months. Flooding may mask where the roadway could be swept away or lead to damage to the pavement substructure.

Outreach with municipalities revealed important gaps in stormwater management and maintenance. Many townships in Erie County own and maintain local roads consisting of hard-packed dirt which are affected negatively by heavy rains and flooding. In the policies section of this report, the LRTP makes a recommendation that municipalities inventory and prioritize their local roadways for paving and drainage upgrades as funding becomes available.

State routes are routinely upgraded for betterments. Stormwater maintenance issues on state routes should be reported to PennDOT as soon as possible.

Many municipalities voiced concerns over development patterns creating large amounts of stormwater runoff and outlet pipes not being adequately sized to convey the stormwater to retention basins. In the policy section of the LRTP, it is recommended that municipalities updated their Subdivision and Land Use Ordinances (SALDO) and enforce them to ensure that properly sized drainage pipes are installed and pervious surfaces be included in design to reduce stormwater runoff in new developments.

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Chapter 3
Evaluation Criteria

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Project Evaluation Criteria

Development of appropriate project evaluation criteria is crucial to ensuring a fair, balanced, and objective view of the numerous candidate projects that were identified through the LRTP listening tour that can be found in Chapter 4. This section focuses on project evaluations at two levels:

- Individual Project Rating & Ranking Criteria (Decision Lens)
- System Wide Performance Measures (Scenario Analysis)

Decision Lens

Candidate project prioritization is based on an objective rating and ranking process using the **Decision Lens** software tool. Decision Lens combines quantitative data and qualitative judgments using mathematical theory to establish a relative score for individual projects. That score is used to help prioritize solutions that will most likely reach the county's established goals.

Decision Lens ratings and rankings address individual project merits across the seven local goal categories outlined first in Chapter 1, which correlate with Federal, State, and local planning direction. The Erie MPO Technical Advisory Committee, representing many different municipalities, was tasked with comparing each of the categories to one another using a pair-based survey technique to establish a weight. The weighted value is out of a total score of 100% for each category and represents the relative importance of each to the transportation needs in Erie County (Exhibit 39).

Within each category, individual **evaluation criteria** are defined to determine to what degree a project meets the goals of a specific category. Each criteria is accompanied by a set of rating possibilities (e.g., Yes or No; Locally or Regionally, etc.) that are subsequently tied to a scoring scale of 0.00-1.00 to obtain the overall weighted score for each candidate project. Further information on Decision Lens weightings can be found in Appendix B along with a comparison to the 2012 LRTP Decision Lens criteria weightings.

Exhibit 39 – Decision Lens Criteria Weightings

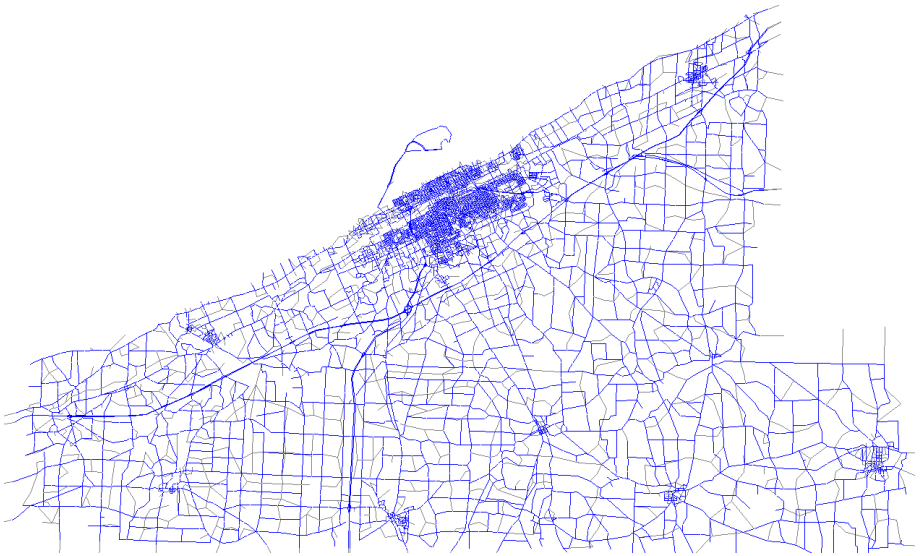
Category Weight (%)	Goal Category	Subcategory Weight (%)
#1 - Safety & Security		
24.0	Non-Motorized Crashes	2.7
	Motorized Crashes	4.8
	Safety Improvement	8.4
	Hazards	4.0
	Security	4.0
#2 - Traffic Congestion and Maintenance		
17.6	AADT	4.2
	Truck %	2.9
	Route Significance	2.7
	Existing Deficiency	7.9
#3 - Economic Vitality		
15.4	Economic Benefit	4.9
	Interstate Access	2.1
	Revitalization	4.0
	Tourism	1.8
	Recreation	2.6
#4 - Feasibility		
11.7	Project Readiness	3.5
	Right of Way and Utility	3.4
	Planning Consistency	4.8
#5 - Multimodal Accessibility & Mobility		
10.9	Pedestrian	4.9
	Bicycle	3.2
	Public Transportation	2.8
#6 - Sustainability		
10.5	Environmental Justice Area	6.0
	Environmental Resources	4.5
#7 - Freight Accessibility & Mobility		
9.9	Rail Service	4.0
	Air Travel	4.2
	Waterborne Transportation	1.7
100.0	Totals	100.0

Scenario Analysis

Recall the Federal and State focus on **performance based planning** discussed in Chapter 1. While you can directly measure the "before" and "after" effects of a built project, predicting the performance of a future planned project poses a challenge. How do you predict if a project will benefit traffic operations in the year 2040? To assist planners in decision-making, Erie County owns and operates a **Travel Demand Model (TDM)** that is sensitive to changes in land use, population and employment demographics, highway and local roadway network, intersection operations, signal timings, and pedestrian and bicycle infrastructure (Exhibit 40). The TDM is an invaluable asset to lend insight when scenario planning. The TDM can be used to forecast traffic for base and future years, for Build and No Build scenarios. This model has been enhanced over the years leading to this LRTP update to:

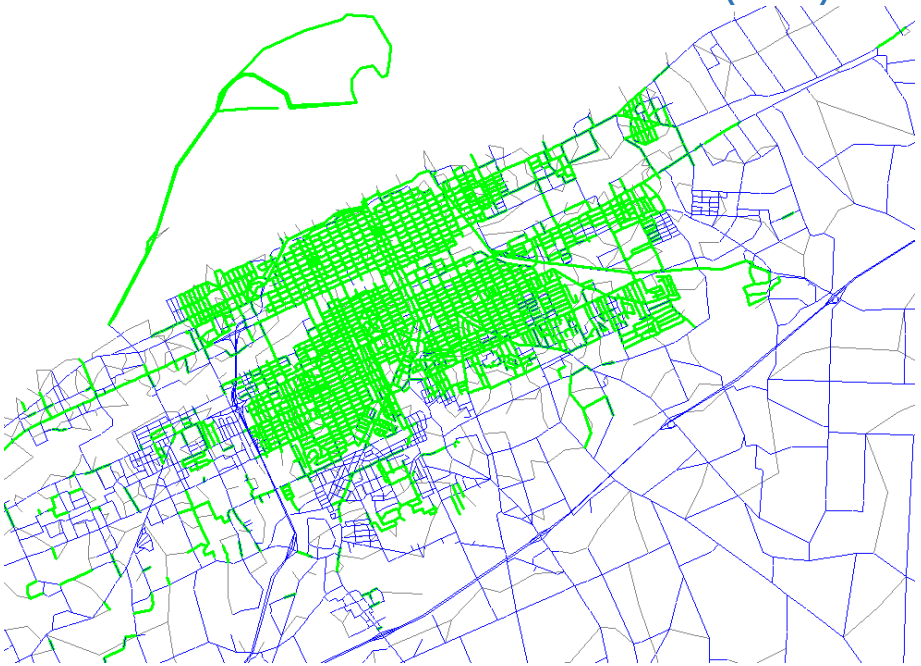
- Account explicitly for traffic operational improvements such as signal coordination and timing adjustments
- Represent a robust local roadway, sidewalk, and trail network
- Predict active transportation and assign walking / cycling trips
- Add new measures of effectiveness such as health risk reductions

Exhibit 40 – Erie County Travel Demand Model Network



A shift in focus in this LRTP as compared to prior plans is an emphasis on **multimodal accessibility**, particularly for providing safe and equitable access to grocery stores, parks, transit, and schools along low-stress routes such as low-volume rural roadways and protected sidewalks, paths, and trails. The model was updated to include specific information on sidewalks (Exhibit 41) and low-stress routes.

Exhibit 41 – Erie TDM Sidewalk/Trail Network (Green)



Some **measures of effectiveness (MOEs)** that can be predicted by the TDM include Level of Service (LOS) at intersections and volume to capacity ratios on roadways, which are common industry measures of how congested an intersection or roadway is. Higher volume to capacity ratios mean that a roadway is getting more congested. LOS "A" means excellent intersection operations, where LOS "F" means very congested, poor operations. Other MOEs include vehicle miles traveled (VMT), vehicle hours traveled (VHT) for the system; new MOEs include active transportation (walk) miles and hours traveled, and health-related mortality risk comparison based on World Health Organization HEAT Tool methodology.

A current and future **baseline scenario** was run through the TDM for comparison to the LRTP scenario. The future scenario accounts for changes in population and employment discussed in Chapter 2, as well as committed projects programmed to be built over the next 12+ years. The committed projects were sourced from PennDOT's Transportation Improvement Plan (TIP) which covers the years 2017-2020, the Twelve Year Program (TYP) through 2028, and Decade of Investment (DOI) projects. While many projects are existing roadway and bridge maintenance, there are operational improvements that make a difference in roadway and intersection capacity that will have an effect in the model. Exhibits 42-43 show the 2010 and 2040 baseline level of service and volume to capacity ratios from the TDM.

The **preferred scenario** that includes all long-range projects was run through the TDM to quantify how the suite of projects would help the MPO meet its goals. A detailed comparison of measures of effectiveness between scenarios can be found in Appendix C, including roadway congestion, level of service, walking time, and for the first time, an approximation of overall health benefits anticipated due to the projects.

Exhibit 42 – Erie 2010 Baseline Congestion

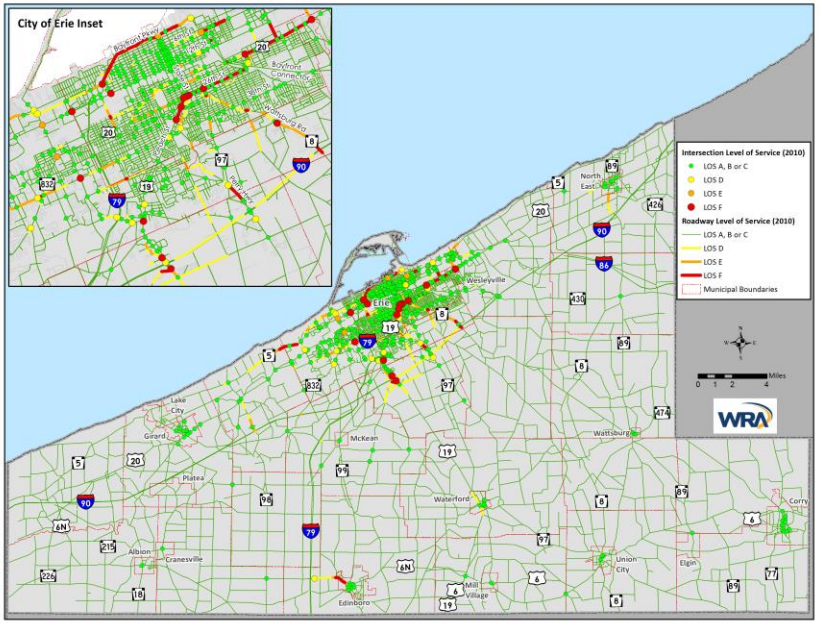
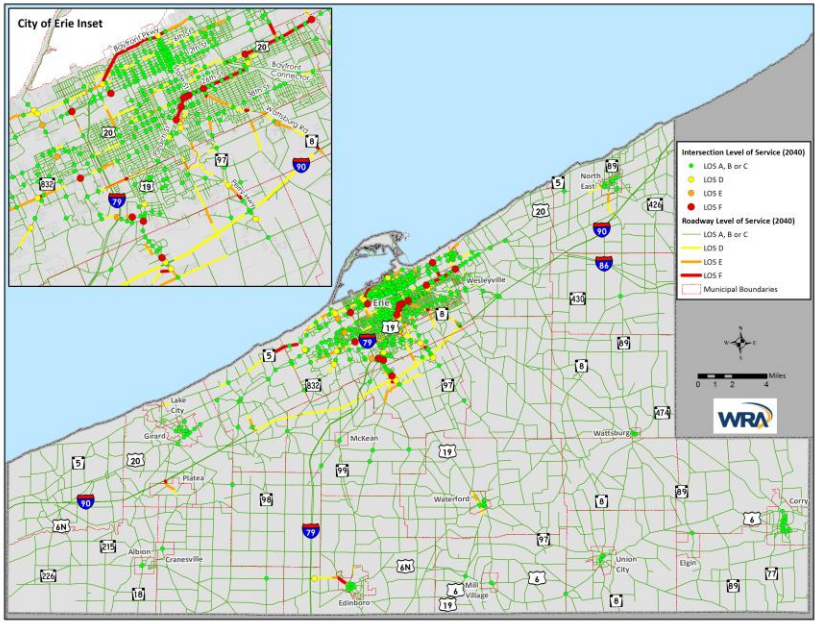


Exhibit 43 – Erie 2040 Future Congestion



Financial Constraint

In order to plan how the recommended LTRP projects can be financially implemented within the time horizon of the plan, a fiscal constraint was applied using an assumption of yearly funds to be available to Erie County over the life of the plan.

Cost estimates were prepared for each project at a planning-level using unit prices and estimates of construction quantities, such as total area of roadway reconstruction, with a percentage of construction (C) cost set aside for preliminary engineering (P), final design (F), right-of-way (R), and utilities (U). Rates were applied to the construction cost to determine cost for Maintenance & Protection of Traffic, Mobilization, Contingencies, and Construction Inspection. Preliminary Engineering and Final Design were assumed at 7.5% of construction cost, with right-of-way and utilities at 5% of construction cost unless otherwise known to be none or greater. A contingency of 40% was added to the construction cost to account for unknown or unforeseen costs. All planning-level forecasts should be carefully reviewed before advancing a project to account for new information and fluctuations in unit costs.

Long range transportation plans are required by PennDOT to account for Year of Expenditure (YOE) project costs. The YOE cost of a project is the current cost plus the anticipated rate of inflation added annually to the projected start date of the project. In this way, the plan can realistically account for anticipated escalations in construction cost and the anticipated level of funding. Based on historic levels of escalation in construction costs, YOE costs were assumed to escalate at 3% per year over the life of the plan.

Exhibit 44 shows three different “Phases” of the plan. The Current phase covers the current TIP plus two years, 2017 through 2022. The next phase Mid-Range covers 2023 through 2028 through the remainder of the current TYP. The Long-Range portion of the plan covers the years 2029-2042, which would cover the next full TYP cycle, and end 25 years in the future.

Exhibit 44 – Project Programming Phases

Phase	Years	Additional Information
Current	2017-2020, 2021-2022 (years 1-4, 5-6)	This phase is the current TIP + 2 years. Projects on this list are occurring at the present time, may have already occurred, or are planned to begin over the next few years. Some studies fall into this category to kick off a list of projects that could be included and resolved in the next LRTP update.
Mid-Range	2023-2028 (years 7-12)	These are the higher priority projects that will ideally advance to the TIP within the next dozen years. Some projects in this phase are split-funded between this phase and the long-range phase. This covers the rest of the Twelve Year Plan.
Long-Range	2029-2042 (years 13-25)	Projects in this phase are supported but will not likely occur within the next 12 years for a variety of reasons including funding, cost, and lower priority through Decision Lens ranking.

Due to the current fiscal environment and focus on asset management, a "fix it first" approach is assumed for project programming. This approach focuses on maintaining the current transportation system of roadways, bridges, and traffic signals first and foremost, with system expansion and improvement taking a secondary role. With this in mind, a maintenance set-aside dedicated to system preservation and maintenance was assumed for all highway and bridge funding that is not expressly dedicated to the HSIP, CMAQ, Rail/Highway Safety, or NHPP. The projected remaining transportation funding for each Federal and State program has been estimated in order to determine the fiscal constraints for the life of the plan (Exhibit 45). Funding past 2020 is assumed flat.

Exhibit 45 – Erie LRTP Estimated Funding ($)

		NHPP	STBG	HSIP	CMAQ	185	581	BOF
Current	2017	330,200	311,200	1,316,800	1,400,800	200,000	160,350	800,000
	2018	341,100	316,200	1,350,400	1,435,200	200,000	164,325	800,000
	2019	353,200	320,100	1,384,000	1,468,800	200,000	168,325	800,000
	2020	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
	2021	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
	2022	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
Mid-Range	2023	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
	2024	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
	2025	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
	2026	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
	2027	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
	2028	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
Long-Range	2029	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
	2030	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
	2031	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
	2032	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
	2033	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
	2034	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
	2035	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
	2036	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
	2037	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
	2038	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
	2039	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
	2040	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
	2041	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000
	2042	365,600	326,000	1,421,600	1,506,400	200,000	172,900	800,000

Federal Funding Categories

NHPP - **National Highway Performance Program** – funding for facilities located on the National Highway System (NHS)

STBG - Surface Transportation Block Grant (STBG) Program – funding for projects that preserve and improve the conditions and performance on any Federal-Aid highway, bridge and tunnel projects on any public road, pedestrian and bicycle infrastructure, and transit capital projects, including intercity bus terminals.

CMAQ - **Congestion Mitigation and Air Quality** –funding for transportation projects and programs that help meet the requirements of the Clean Air Act.

HSIP - **Highway Safety Improvement Program** – funding with the purpose of achieving a significant reduction in fatalities and serious injuries on all public roads, including local public roads.

RHCP - Railway Highway Crossing Program – funding to improve railway and highway crossings.

PL - Metropolitan Planning – funding for metropolitan planning activities to provide for a continuing, comprehensive, and cooperative transportation planning process

NHFP - National Highway Freight Program – funding to to improve the efficient movement of freight on the National Highway Freight Network (NHFN)

BOF - this category of funds may be used for off system bridges that are defined with a functional class of 08, 09, or 19 only.

State Funding Categories

Appropriation 185 - state funding that can be applied to state bridge projects.

Appropriation 581 - state funding that can be applied to highway or bridge projects on the State highway system.

Detailed information on federal, state, and local match percentages and "eligible activities" for the above funding sources can be found in Appendix D. Alternative funding sources that could be pursued but are not assumed to be available are Recreational Trails Program (RTP) funding under Section 206 of Title 23, and Safe Routes to School (SRTS) projects within 2 miles of a school for K-8. Public Private Partnerships (P3) are also encouraged to be pursued through cooperation between municipalities and developers or advocacy groups to fund projects that mutually benefit both parties.

Projects move from concept to physical construction after they are "programmed" through a few different avenues. Each project must be vetted, have funding sources dedicated, and each phase of the project including study, preliminary engineering, final engineering, right-of-way, utilities, and construction will be programmed in the Transportation Improvement Program (TIP). The TIP details which projects happen in the next 4-year cycle. The Twelve Year Plan details longer range projects that are planned to happen over a 12-year cycle, and include the TIP projects.

The prioritized list of LRTP projects (Appendix E) was financed in order of priority according to the availability of potential funding sources. Other funding mechanisms exist to advance projects, and as project phases are removed from the listing because they are funded from external sources, the next highest priority project should move ahead and be programmed sooner.

Chapter 4
Recommendations & Implementation

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Preferred Scenario Overview

The projects in this chapter were developed as a result of the extensive public and stakeholder outreach; projects were categorized by type of project: Highway Projects, Pedestrian and Bicycle Projects, Betterments, Studies, Local Projects, and Policies. Other planned projects from PennDOT's Highway, District Bridge, Local Bridge, Transit, and Aviation were referenced from the appropriate agency. Descriptions of each category of project can be found in Exhibit 46.

To address all modes of transportation, the project team consulted with airport officials, PennDOT District 1-0 on planned highway and bridge projects, and the transit agency to obtain their planned long-term capital improvements for the LRTP project listing.

PennDOT District 1-0 provided the MPO with the state bridge list with estimated costs from MPMS. The local bridge list was also provided by PennDOT, though it is not prioritized and cost estimates may not be current. A recommendation of this plan is for local municipal officials and PennDOT to work together to update and prioritize these local bridges for rehabilitation or removal.

The Erie Metropolitan Transit Agency (EMTA) oversees the transit operations within the county. EMTA staff provided an updated look at their project priorities. Most projects are operational costs or minor equipment purchases, which makes projecting several years into the future challenging.

PennDOT's Bureau of Aviation (BOA) compiled and updated the project listing for the Corry-Lawrence Airport. The BOA develops their own long term planning document which contains a list of projects for eight years into the future. The Erie International Airport – Tom Ridge Field provided their planned capital improvements.

Exhibit 47 shows the location of all LRTP recommendation categories throughout Erie County. Project descriptions and maps follow for each of the LRTP categories (Exhibits 48-53). The implementation schedule of these projects along with fiscal constraint can be found in Appendix E. It should be noted that the airport, transit, and bridge projects are in current year dollars, where the LRTP projects are funded in order through their decision lens ranking and available funding categories in Year of Expenditure (YOE) dollars.

Exhibit 46 – LRTP Recommendation Categories

Category	Description	Source
Highway Projects	Projects affecting automobile and freight travel that are well-developed; these projects aim to improve accessibility, mobility, safety, congestion, and aesthetics.	LRTP
Pedestrian and Bicycle Projects	Projects affecting pedestrian and bicyclist travel that are well-developed; these projects aim to address accessibility, mobility, safety, equity, recreation, and improve health and expand tourism.	LRTP
Betterments	The purpose of this listing is to identify critical gaps in pedestrian and bicycle infrastructure, as well as roadway maintenance, so upgrades can be considered during routine roadway improvement or maintenance projects along the identified routes.	LRTP
Studies	Studies were recommended when groups of comments focus on a particular area, but there is insufficient information currently available to develop a specific project to address the area's needs.	LRTP
Local Projects	Projects similar to the Highway Projects that should be locally-focused and developed. These projects were mapped and included in the plan so that they can be incorporated into future municipal planning and project development efforts.	LRTP
Policies	Policy statements can encompass recommendations such as land use changes, municipal coordination, and improved procedures.	LRTP
Highway / Other	List of highway projects on PennDOT's current TIP, TYP, and post-TYP with cost estimates. Found in Appendix C.	PennDOT
District Bridges	List of State Bridges for rehabiliation on PennDOT's current TIP, TYP, and post-TYP with cost estimates. Found in Appendix C.	PennDOT
Local Bridge	List of Local Bridges in need of repair, rehabilitation or removal. This list is unprioritized and cost estimates may be outdated. A key recommendation of this LRTP is to prioritize this list and update cost estimates. Found in Appendix C.	PennDOT
Transit	A list of planned transit projects from EMTA. Found in Appendix C.	EMTA
Aviation	A list of planned aviation projects from PennDOT Bureau of Aviation and Erie International Airport. Found in Appendix C.	BOA; ERI

Exhibit 47 – Erie County LRTP Preferred Projects (ALL)

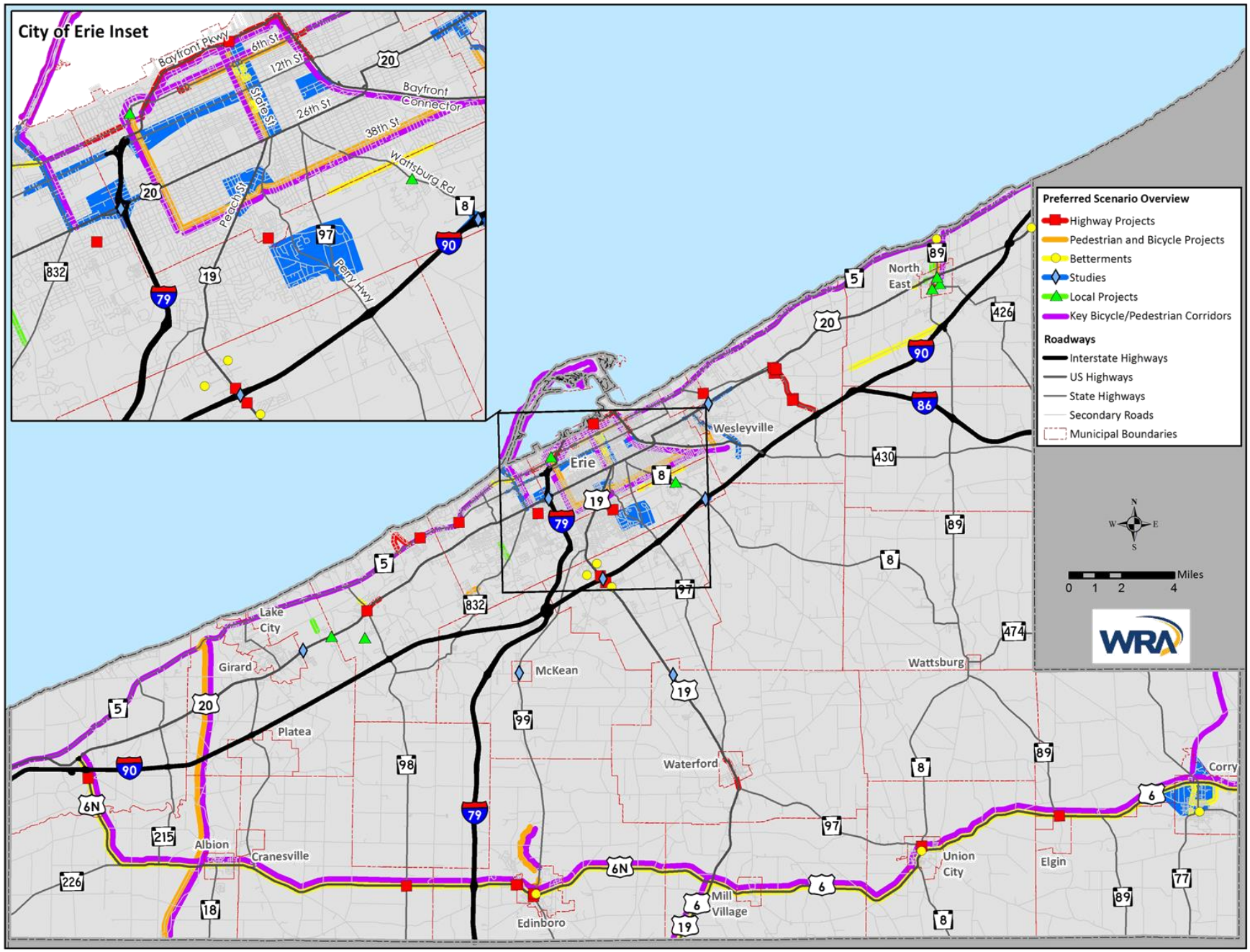


Exhibit 48a – Highway Projects (Map)

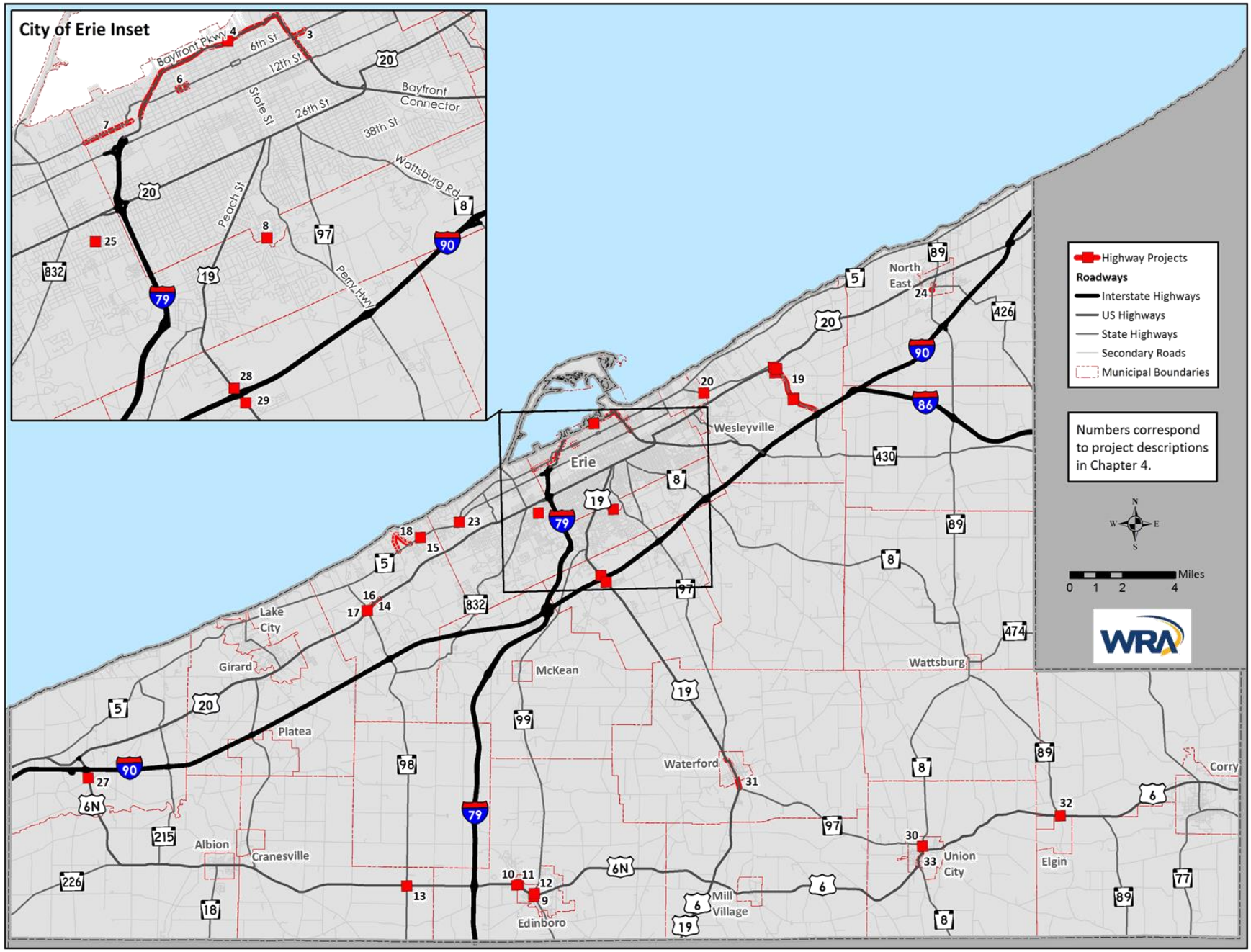


Exhibit 48b – Highway Projects (Descriptions)

ID	Title	Municipality	Description
3	Bayfront Parkway at 6th Street Intersection Improvements	City of Erie	Construct intersection improvements potentially including bump outs and reconfiguration of geometry to reduce the crossing distance and exposure time for pedestrians, as well as enhanced push-buttons and crosswalk striping to improve safety for pedestrians.
4	Bayfront Parkway Multimodal Improvements	City of Erie	Construct prioritized study outcomes addressing accessibility between the Bayfront and Downtown, as well as congestion, multimodal safety, and equity. Project may include improvements for multi-modal safety and operations, landscaping, beautification, additional access points for residents on the Bluffs to access the Bayfront, grade-separated improvement at State Street, and enhancement of existing multi-use trail. Improvements should serve as a connection between the Bayfront and Downtown rather than a division.
6	Gridley Park Parking, Safety, and Multimodal Enhancements	City of Erie	Construct roadway improvements in the area surrounding Gridley Park in West Bayfront, including all-way stops at intersections, angled parking, bump outs, and traffic calming measures.
7	West 8th Street Traffic Calming and Streetscape Improvements	City of Erie	Construct traffic calming and streetscape project on West 8th Street from Pittsburgh Avenue to Greengarden Boulevard.
8	Gore Road at Cherry Street Intersection Improvements	City of Erie, Millcreek Township	Realign roadway to remove staggered intersection and come together at a 90-degree angle to provide better sight distance and improve safety at Gore Road and Cherry Street.
9	PA 99 / Chestnut Street / Waterford Street Roundabout	Edinboro Borough	Construct new roundabout at PA 99 / Chestnut Street / Waterford Street in Edinboro.
10	US 6N & Angling Road Roundabout	Edinboro Borough	Construct new roundabout at US 6N / Angling Road in Edinboro.
11	US 6N Angling Road to Maple Drive 3 Lane Section	Edinboro Borough	Convert US 6N to a "3-Lane" between the intersections of Angling Road and Maple Drive w/ pedestrian improvements, traffic signals and/or roundabouts.
12	US 6N & PA 99 Intersection Improvements	Edinboro Borough	Construct potential northbound dual left-turn lanes and westbound dual thru-lanes on approach to the US 6N / PA 99 intersection in Edinboro and modify related signal operations.
13	US 6N & PA 98 Intersection Improvements	Elk Creek	Construct intersection improvements to address safety and congestion concerns at US 6N & RT 98 Intersection.

ID	Title	Municipality	Description
14	Downtown Fairview Streetscape Improvements	Fairview Township	Implement streetscape elements in downtown Fairview along US 20 from Maple Avenue to Dennis Avenue; streetscape should include sidewalks, street furnishings, lighting, drainage improvements, and on-street parking.
15	Route 5 at Hardscrabble Road Intersection Realignment	Fairview Township	Realign Route 5 at Hardscrabble Road to come to a 90-degree intersection to improve line of sight, safety, and traffic operations.
16	US 20 at Olde Ridge Road Intersection Reconfiguration with Multimodal Enhancements	Fairview Township	Realign the intersection of US 20 at Olde Ridge Road to reduce skew and improve sight distance for vehicles; enhance accessibility for pedestrians by installing sidewalks extending to Evergreen Trail.
17	US 20 at SR 98 Fairview Signal Retiming	Fairview Township	Upgrade traffic signal equipment and traffic signal timing and phasing to reduce congestion at US 20 at SR 98.
18	Walnut Creek Parking & Traffic Calming Improvements	Fairview Township	Construct a 5 foot paved berm similar to that found on Route 5 for multimodal accessibility and additional overflow parking during fishing season to the Walnut Creek Access Area and Marina.
19	Depot Road Improvements	Harborcreek Township	Implement the Depot Road study recommended improvements, including flattening the horizontal curve radius, adjusting vertical grades, adding turn lanes, shoulder widening, driveway tie-ins, installing snow fence, and intersection realignment.
20	Iroquois Avenue at Nagle Road Intersection Improvement Project & Signal Upgrades	Harborcreek Township, Lawrence Park Township	Construct intersection improvements and signal upgrades such as protected left-turn phasing at this intersection.
23	US 5 at West 12th Street at Asbury Road	Millcreek Township	Realign the northern legs of this 5-legged intersection to enhance capacity and improve traffic operations and safety; potential long-term solutions at the intersection could include a roundabout or roadway reconstruction to become a 4-legged intersection.
24	SR 89 Enhancements in North East	North East Borough	Construct improvements to Clinton Street at Pearl Street intersection including enhanced crosswalk striping and all-way stop analysis or reversal of major and minor flows to improve safety and accessibility. Construct missing sidewalk link along SR 89 and install curb cuts at the Kwik Fill driveway to properly denote the gas station parking lot and improve safety for motorists and pedestrians.
25	Zuck Road at West 32nd Street	Millcreek Township	Construct turn lanes and protected/permitted left-turn phasing for the northbound and southbound approaches at this signalized intersection.

ID	Title	Municipality	Description
27	US 6N RR Underpass	Springfield Township	Reconstruct the RR underpass along US 6N to increase overhead clearance to meet adequate safety and design standards to eliminate obstructions to freight and commercial traffic.
28	I-90 / US 19 / Peach Street Signal Upgrades and Coordination	Summit Township	Conduct traffic analysis and design of coordinated traffic signal system using adaptive signal control to account for changing traffic patterns such as holiday shopping season, emergency detour route diversions from I-90, and general weekday peak hour traffic. Analysis and recommendations should take into account operations of personal motor vehicles along with transit, commercial vehicles, pedestrians, and bicyclists.
29	US 19 at Oliver Road	Summit Township	Construct capacity enhancements such as widening on Oliver Road, additional turn lanes, traffic signal phasing changes, and accommodations for pedestrians to safely cross US 19 or Oliver Road.
30	North Main Street at Perry Street Intersection Improvement Project	Union City Borough	Realign intersection to improve sight distance; improve signing and pavement marking and consider turn lanes, review traffic signal warrants, etc.
31	Waterford Streetscape	Waterford	Construct streetscape project through Waterford along SR 97, including sidewalks, street furnishings, lighting, and upgrades to parking.
32	US 6 at Beaver Dam Road Intersection Improvement Project	Wayne Township	Construct intersection improvements to remove obstructions to sight distance and improve intersection safety. Since this intersection is along Route 6 which has been identified through local planning efforts as a key bicycle route, consider the construction of amenities for the future US 6 bike route according to the PA Route Master Plan Design Guide.
33	Union City Signals Project	Union City	Perform traffic analysis, upgrade equipment, and prepare signal timings at three (3) traffic signals in Union City to improve operations and safety by reducing congestion.

Exhibit 49a – Pedestrian and Bicycle Projects (Map)

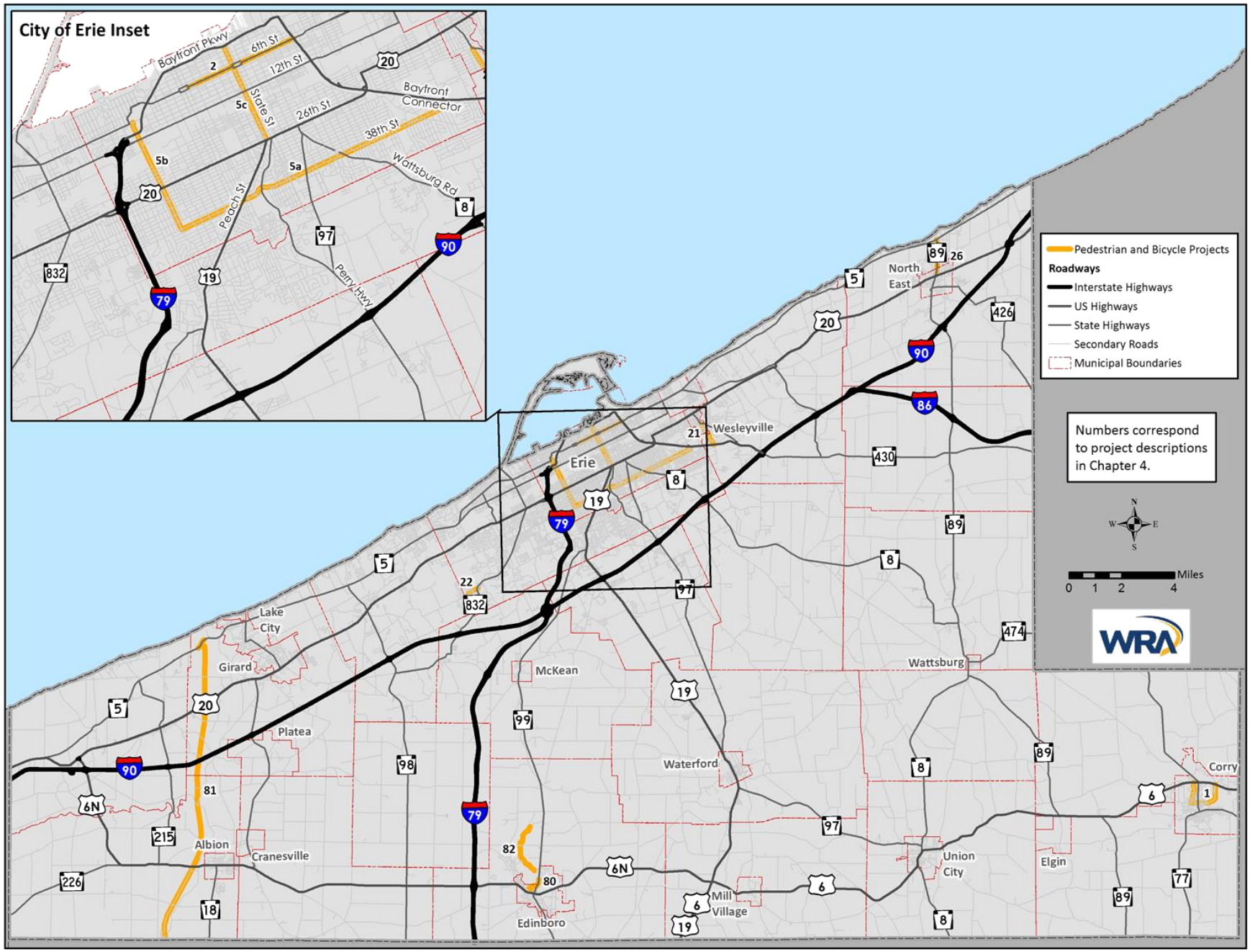


Exhibit 49b – Pedestrian and Bicycle Projects (Descriptions)

ID	Title	Municipality	Description
1	Route 6 Bikeway – Corry Loop	City of Corry	Construct the Corry Loop of the US 6 Bicycle Route to connect the future regional bicycle trail to downtown Corry; project may include shoulder widening, bicycle lane or cycle track striping, trail signage, bicycle racks near downtown Corry, and trail town marketing to encourage economic activity through cycle tourism. Public private partnerships should be encouraged to make trail town successful.
2	6th Street Bicycle Lanes from Gridley Park East	City of Erie	Construct bicycle lanes along 6th Street within existing right-of-way and add bicycle lane signage to extend the bicycle lane east of Gridley Park to downtown and through East Bayfront.
5a	Erie Loop Bikeway - 38th Street	City of Erie	Construct the east-west portion of the Erie Loop Bikeway through a road diet on 38th Street within the current right-of-way where possible. Provide bicycle lanes to separate cyclists from the general flow of traffic to minimize congestion and improve safety for motorists and cyclists. Total limits should be approximately 5 mile section along 38th Street between Greengarden Boulevard and the Bayfront Parkway.
5b	Erie Loop Bikeway - Greengarden Boulevard	City of Erie	Construct the western limit of the Erie Loop Bikeway through providing bicycle lanes on Greengarden Boulevard to separate cyclists from the general flow of traffic and minimize congestion and improve safety for motorists and cyclists. Restripe the current roadway geometry along Greengarden from 38th Street to Route 5 near Frontier Park. Potential improvements include dedicated bicycle lanes, sharrows, and Share the Road signs where geometry does not allow for exclusive bicycle lanes. Total limits should be approximately 2.5 mile section along Greengarden Boulevard between Route 5 and 38th Street.
5c	Erie Loop Bikeway - French Street	City of Erie	Construct the central trunk of the Erie Loop Bikeway by providing a cycle track to separate cyclists from the general flow of traffic. Minimize congestion and improve safety for motorists and cyclists by restriping one of the three existing travel lanes along French Street. Limits from approximately 38th Street in the south to UPMC and the Bayfront Parkway in the north. French Street is recommended over State Street due to its lower stress nature. The extensive roadway width in this section could accommodate a two-way cycle track with minimal impact to traffic operations; a delineated buffer area between the cycle track and travel lanes could be removed in the wintertime to accommodate snow plowing.
21	Shannon Road (SR 4030) Sidewalk Project	Harborcreek Township, Wesleyville Borough	Construct sidewalks along Shannon Road to reach Bayfront Parkway and southward to Wintergreen Gorge and Penn State Behrend.

ID	Title	Municipality	Description
22	Heidler Road from Pebble Creek Drive to Walnut Creek Middle School Sidewalks	Millcreek Township	Construct sidewalks to provide safe linkage from residential neighborhood along Heidler Road to Walnut Creek Middle School. Potential Safe Routes to School project.
26	SR 89 Hiker-Biker Path to Seaway Trail	North East Township	Construct a separated hiker-biker path to the Seaway Trail and Freeport Beach from Downtown North East along the alignment of SR 89.
80	Edinboro Lake Boardwalk	Edinboro Borough, Washington Township	Install a boardwalk along the southern edge of Edinboro Lake from the Edinboro mall area to the eastern edge along Route 99 to support downtown revitalization, recreation, and tourism.
81	Lake Erie Bluffs to Albion Rail Trail	Girard Township, Conneaut Township	Construct paved asphalt or gravel trail along abandoned rail bed connecting Lake Erie Bluffs State Park and the Seaway Trail south to Albion; coordinate early with adjacent land owners for right-of-way.
82	Edinboro Wayne Park Trail	Edinboro Borough, Washington Township	Construct a multi-use trail connecting downtown Edinboro, Edinboro Lake, and Wayne Park in Washington Township. A short-term, low-cost effort would be to include this future trail on an official map.

Exhibit 50a – Betterments (Map)

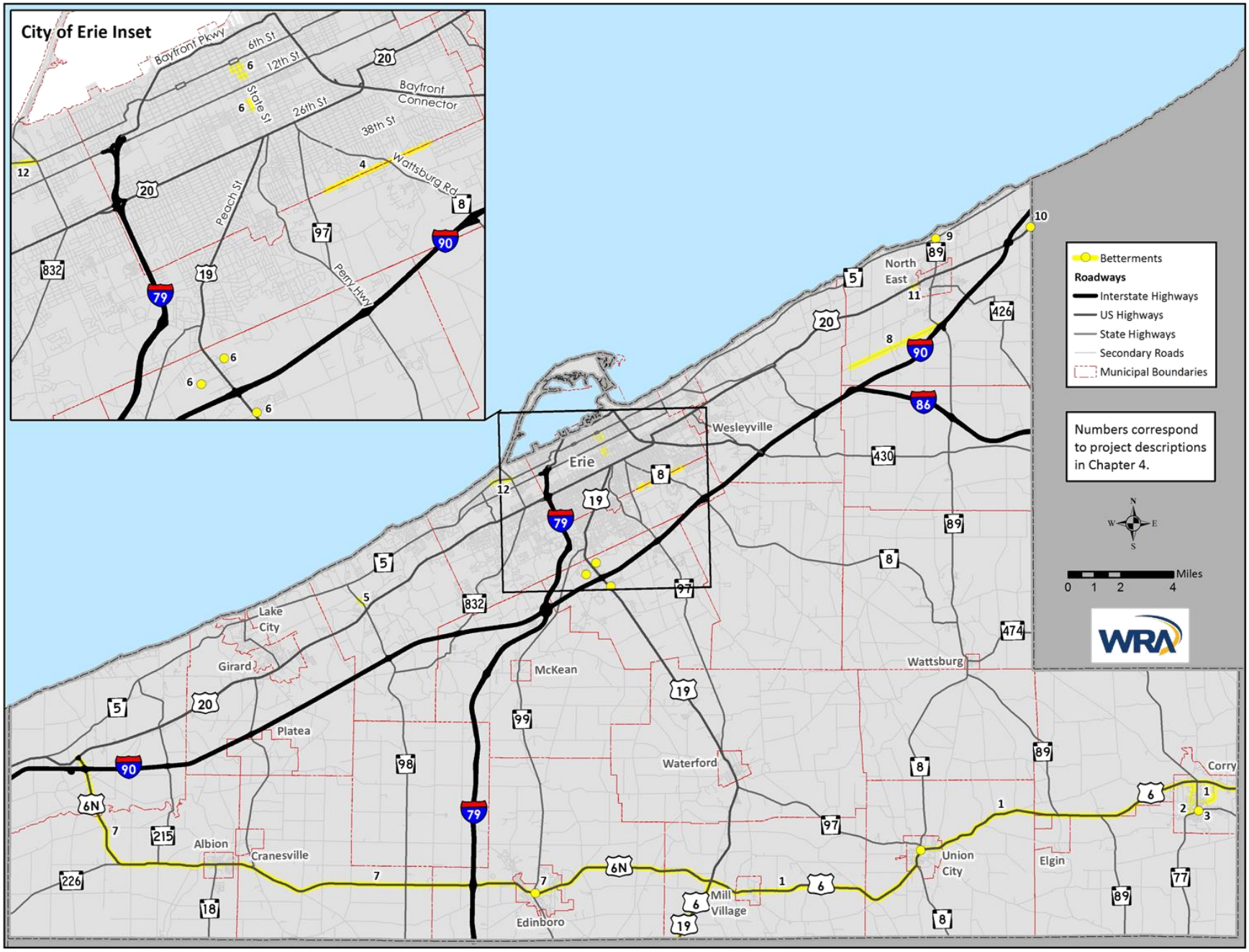


Exhibit 50b – Betterments (Descriptions)

ID	Title	Municipality	Description
1	US 6 Bikeway	LeBoeuf Township; Mill Village Borough; Union Township; Union City Borough; Concord Township; Wayne Township; City of Corry	Construct Route 6 Master Plan recommendations for a bikeway along US 6 from the Erie County line in LeBoeuf Township through Mill Village, Union City, and Corry (which may includes tasks to widen shoulders, move / replace / remove guiderail, and add signage) when the state route is due for a betterment.
2	Mead Avenue (SR 166)	City of Corry	Consider Mead Avenue (SR 0166) for sidewalk construction along both or either sides of the roadway along the railroad tracks when the state route is due for a betterment.
3	Center Street (SR 426)	City of Corry	Consider Center Street (SR 462) for sidewalk construction along both or either sides of the roadway along the railroad tracks when the state route is due for a betterment.
4	East Grandview Boulevard	City of Erie; Millcreek Township	Upgrade pavement surface and install curb ramps and complete missing sidewalk links on East Grandview Boulevard when route is due for a betterment.
5	Rt 98 / Avonia Road	Fairview Township	Consider Route 98 Avonia Road from Canal Road to Toby Court for a sidewalk connection between residential neighborhoods and businesses in Fairview Township when state route is due for a betterment.
6	Peach Street, State Street, 10th Street	City of Erie; Summit Township; EMTA	Construct bus pull-off locations at: Peach Street between 7th and 8th Street, Parking Garage near French between 7th and 8th Street, State Street between 9th and 10th Streets, 10th Street between State and French Street, and State Street between 16th and 18th. These locations were identified by EMTA. Additional public private partnerships should be pursued to install transit shelters and amenities at Lowe's, Sam's Club, and near the intersection of Peach at Robison.
7	US 6N Bikeway	Springfield Township; Conneaut Township; Albion Borough; Elk Creek Township; Washington Township; Edinboro Borough; LeBoeuf Township	Pursue roadway widening along US 6N according to the Moving Forward Along Route 6 plan through Edinboro, Union City, and Corry when the state route is due for a betterment. Pursue community efforts to make these "Heritage Towns" along the route.
8	Sidehill Road (SR 1008)	North East Township	Full reconstruction and stormwater upgrades along Sidehill Road (SR 1008) in North East Township to correct slope and embankment failure and remove the roadway weight restriction. Non-pedestrian or bicycle project.

ID	Title	Municipality	Description
9	US 5 at SR 89	North East Township	Construct road diet along the US 5 corridor near its intersection with SR 89 to reduce travel speeds through corridor, improve traffic and multimodal connectivity between downtown North East and Freeport Beach, and reduce crossing distance across Route 5 when state route is due for a betterment.
10	US 20 at Stinson Road	North East Township	Construct roadway connection to improve sight distance at the intersection of US 20 and Stinson Road when state route is due for a betterment.
11	US 20 West Access Control	North East Township	Coordinate with business owners along US 20 in the Valley to consolidate driveways by striping or installation of curbing along US 20 to improve safety by reducing conflict points between traffic on US 20 and parking lots when state route is due for a betterment.
12	SR 5 West Lake Road	Millcreek Township	Construct sidewalks and consider installation of lighting at key locations to improve visibility of pedestrians when state route is due for a betterment; or further as a project through the municipality.

Exhibit 51a – Studies (Map)

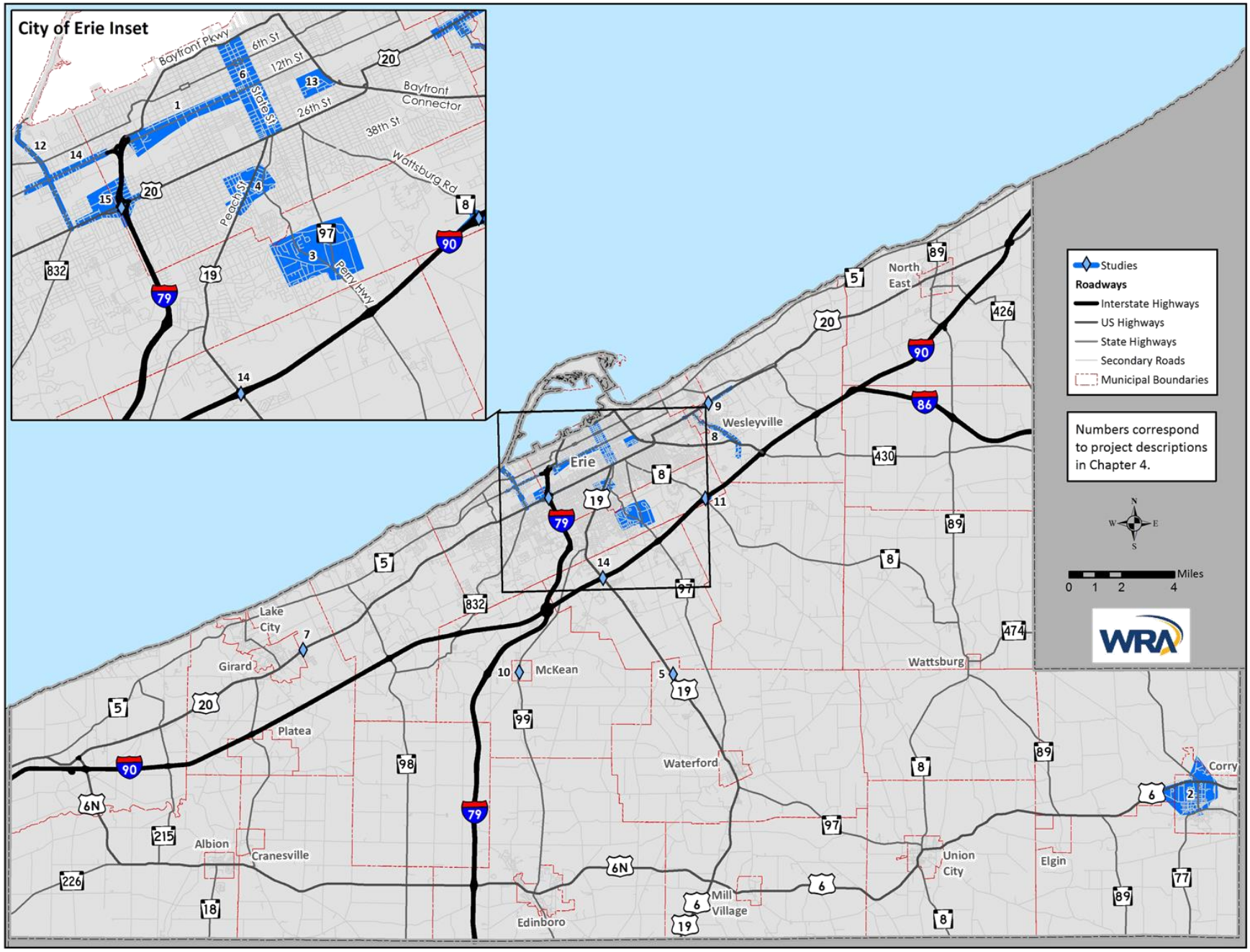


Exhibit 51b – Studies (Descriptions)

ID	Title	Municipality	Description
1	12th Street Transportation and Land Use Study	City of Erie	Land use and transportation study to revitalize the 12th Street industrial corridor into potential mixed-use development with multimodal transportation infrastructure.
2	Signals of Corry	City of Corry	Study of traffic circulation, signal warrants, left turn lane and phase warrants, at approximately seven (7) signals in Corry; study should include recommendations on equipment upgrades, potential signals for removal / conversion if applicable, intersection improvements, and signal timing plans.
3	Old French Road and Perry Highway Vicinity Traffic Circulation Study	Millcreek Township	Traffic and safety study in the area around Old French Road due to many roadways intersecting at odd angles creating traffic circulation and safety concerns; study should recommend projects for implementation to address issues.
4	Liberty and 38th Street Area Traffic Study	City of Erie	Traffic circulation study in the vicinity of Liberty Avenue and 38th Street addressing congestion, multimodal safety, and accessibility.
5	Countywide Pedestrian and Bicycle Plan	Multi-municipal	Study considering opportunities for countywide pedestrian and bicycle facilities that support accessibility, healthy living, and recreational tourism such as sidewalks, trails, and bicycle lanes; study should include an inventory of existing facilities, including facility counts to establish baseline pedestrian and cyclist usage and trail user surveys, as well as establish planned projects, and outline preliminary alternatives for new facilities. The outcome of the plan should be a prioritized action plan with cost estimates, responsible parties, and funding sources identified.
6	Erie Downtown Traffic Circulation and Parking Study	City of Erie	Study of traffic circulation in downtown Erie, including signals, one-way street pairs, multimodal accessibility, and parking.
7	US 20 Access Management in Girard Township	Girard Township	Study to develop an access management plan for US 20 in Girard Township from School Street to Imperial Parkway, particularly due to concerns voiced over the number of conflicting driveway access points between Westgate Drive and Imperial Parkway.
8	Bayfront Parkway / Station Road / PSU Behrend Pedestrian Circulation and Safety Study	Harborcreek Township	Study of pedestrian movement between student housing and Bayfront Parkway; study should recommend preliminary design alternatives to provide direct, safe connections and encourage pedestrians to use them to cross the Bayfront Parkway.
9	US 20 Harborcreek Township Signal Retiming Study	Harborcreek Township; Wesleyville Borough	Study of traffic circulation, signal warrants, left turn lane and phase warrants at approximately twelve (12) signals in Harborcreek Township and Wesleyville Borough; study should include recommendations on equipment upgrades, traffic signal coordination, potential signals for removal if applicable, intersection improvements, and signal timing plans.

ID	Title	Municipality	Description
10	Edinboro Road at West Road Traffic Improvements at Intersection / Signal Warrant Study	McKean Borough	Study of potential improvements to Edinboro Road at West Road to address traffic congestion and safety concerns; potential signal warrant study.
11	I-90 at Route 8 Interchange Ramp Traffic Circulation	Millcreek Township; Greene Township	Study of traffic circulation and ramp configurations around the interchange of I-90 at Route 8, to be pursued as development pressure occurs.
12	Peninsula Drive from US 20 to Presque Isle Traffic Operations and Multimodal Accessibility Study	Millcreek Township	Study of traffic and multimodal accessibility on Peninsula Drive to make this route a welcoming gateway to Presque Isle for all modes of transportation; results should be preliminary design alternatives to incorporate pedestrians, bicycles, and transit into existing transportation system and improve traffic signal equipment and timings.
13	Erie Opportunity Corridor Land Use and Transportation Study	City of Erie	Community-driven study of land use and transportation to revitalize and rehabilitate the Erie Opportunity Corridor, a large vacant lot that is blighted on the east side of Erie.
14	West 8th Street at West Erie Plaza/Pittsburgh Avenue Multimodal Study	Millcreek Township	Multimodal mobility study in the vicinity of 8th Street in Millcreek Township; study should account for pedestrian, bicycle, transit, automobile, and truck movement in the vicinity and recommend improvements for implementation.
15	I-79 / US 20 / West 26th Street Interchange Traffic Circulation and Safety Project	City of Erie, Millcreek Township	Safety and traffic circulation study of interchange ramp configuration and access management at the interchange of I-79 and US 20 / W 26th Street. This study should be pursued as development pressure occurs.

Exhibit 52a – Local Projects (Map)

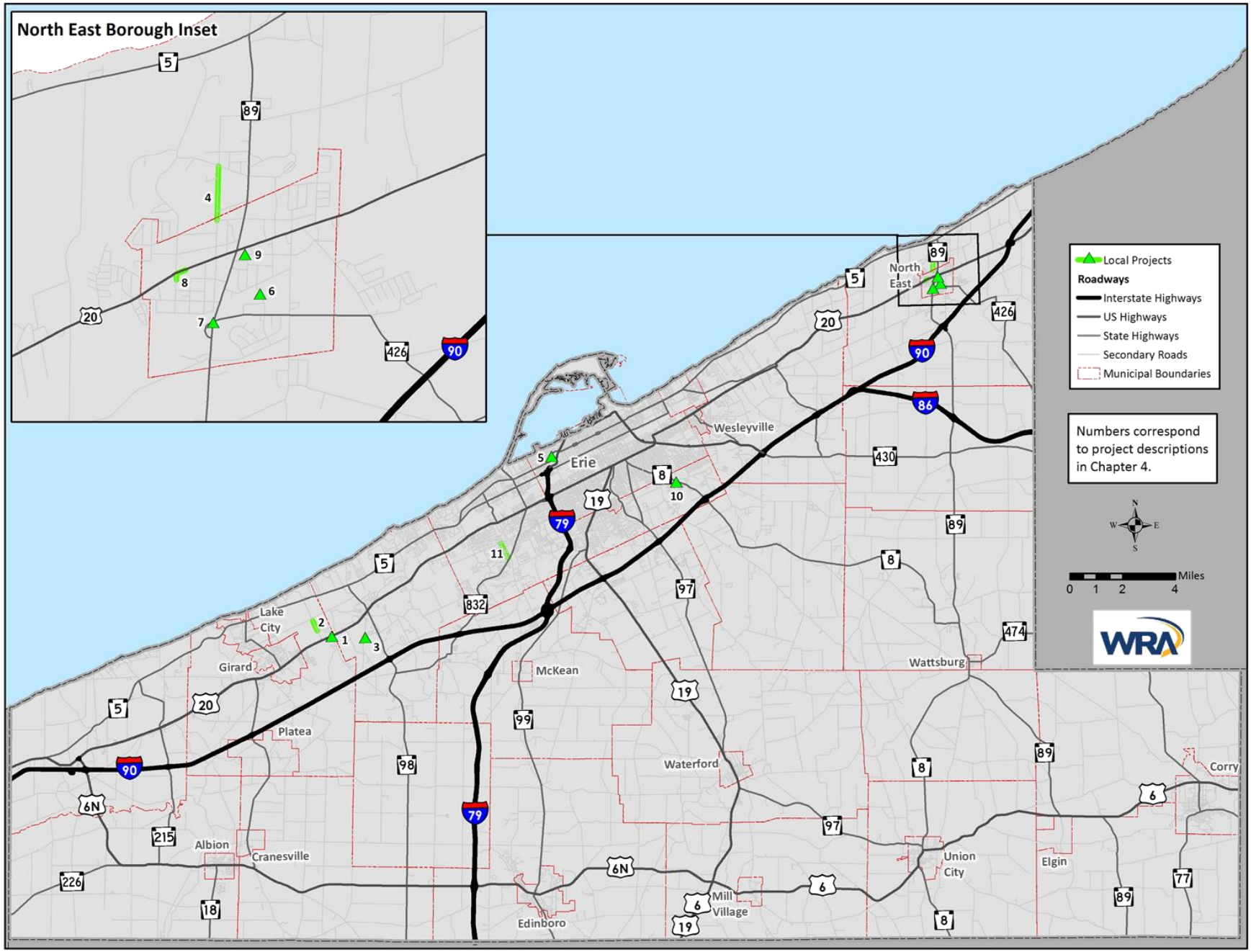


Exhibit 52b – Local Projects (Descriptions)

ID	Title	Municipality	Description
1	Dagget Road at Birchdale Road Intersection Improvements	Girard Township	Consider traffic calming and safety upgrades in the vicinity of US 20 at Dagget Road and Birchdale Drive, including adjusting the intersection offset to come together at a 90-degree angle to improve sight distance and enhancing signing & pavement markings.
2	Fairplain Road Reconstruction	Girard Township; Railroad	Reduce the crest of the vertical curve on Fairplain Road to improve sight distance and update railroad crossings to enhance freight access, particularly for the Gravel Pit on the east and other industry as water and sewer expand.
3	Franklin Road and Fairfield Drive Intersection Realignment	Fairview Township	Realign Franklin Road and Fairfield Drive to reduce intersection skew to improve operations and safety.
4	Pearl Street Landscaping and Sidewalks	North East Township	Construct traffic calming measures and provide sidewalks along Pearl Street near Mercyhurst North East to improve safety.
5	Shawnee Drive at W 6th Street at Cherokee Drive Intersection Improvement Project	City of Erie	Construct intersection improvements and traffic calming measures at the intersection of Shawnee Drive at West 6th Street/Cherokee Drive near Frontier Park. Alternatives should better clarify traffic control and vehicle movements and provide for safe crossings for pedestrians over the large paved area and consider ways to incorporate bicycle traffic.
6	Smedley Street Sidewalk and Pedestrian Crossings	North East Borough;	Improve the pedestrian crossing over the railroad tracks at Smedley Street near the Four Nine store, a major pedestrian crossing in North East.
7	SR 89 Underpass Gateway Enhancements	North East Borough	Enhance the SR 89 railroad underpass with community art / mural, welcoming gateway signage, and lighting.
8	US 20 at Mill Street Access Control	North East Borough	Coordinate with business owners to consolidate driveway access points and relocate driveway access to a safer distance from the signalized intersection of US 20 at Mill Street to reduce conflict points.
9	Vine Street Municipal Lot Sight Distance	North East Borough	Stripe out / eliminate a parking space on Vine Street to allow for better sight distance for vehicles exiting the municipal parking lot.
10	Wattsburg Road at Norcross Road Intersection Improvement	Millcreek Township	Realignment of Wattsburg Road at Norcross Road intersection to reduce skew and improve sight distance.
11	Colonial Avenue Reconstruction - West 38th Street (SR 4016) to Old Sterrettania Road	Millcreek Township	Total reconstruction of Colonial Avenue from West 38th Street to Old Sterrettania Road.

Policies

Exhibit 53 – LRTP Recommended Policies (Descriptions)

ID	Responsible Parties	Description
1	City of Corry	Identify gaps in the existing sidewalk network and prioritize projects for construction to complete sidewalk network and provide safe routes to key destinations and residential areas in Corry, such as schools, shopping, businesses, over railroad tracks, and to employment centers.
2	City of Erie	Consider one side parking restrictions on Cascade Street between 37th and 38th Street to avoid de-facto one-lane operation when cars are parked on both sides of the street.
3	City of Erie	Pursue land assemblage as blighted properties are removed in the East Bayfront area to promote community parks and encourage programs that provide hands-on job training for residents on demolition / construction services on these local projects.
4	City of Erie; PennDOT	Consider multimodal uses (pedestrians, cyclists, transit) when any improvements are made to East 38th Street due to potential right-of-way available.
5	City of Erie; Bicycle Groups	Identify and prioritize bicycle and other multimodal routes between downtown Erie and outlying rural areas and communities to connect tourist destinations to the south and east such as Peek n Peak. Potential routes could include Route 8 or Station Road.
6	City of Erie	Work with the Port of Erie to identify key locations to develop as warehouse and distribution centers and transportation improvements needed to facilitate freight movement.
7	City of Erie	Pursue alternate funding sources to improve congestion and construct multimodal improvements along State Street (Green Light Go, Multimodal Funds, etc.)
8	City of Erie	Support the Downtown Streetscape Master Plan by encouraging business owners to update facades, provide outdoor dining options, and reference the Downtown Streetscape Master plan when selecting streets for rehabilitation.
9	City of Erie	Support redevelopment and transportation infrastructure enhancements to vacant or abandoned properties, making them mixed-use, multimodal, and accessible. Pursue studies to prioritize and achieve the community's goals for post-industrial sites.
10	City of Erie; Our West Bayfront	Support Our West Bayfront Neighborhood goals by supporting the upgrade and installation of new trail-level lighting at Bayview Park, and other identified priorities that are ready for implementation, possibly through Transportation Alternatives Program (TAP) funding or other sources.
11	City of Erie; UPMC; Erie County Health Department	Support partnership between the City of Erie, UPMC, and other interested private parties to enhance multimodal access and improve health downtown by providing bike share locations, lockers, bicycle racks, and other amenities to encourage active transportation. Support bicycle lanes and sidewalk network completion.
12	Countywide	Identify and prioritize dirt roads for paving; municipalities and PennDOT should coordinate to determine federal aid local routes.
13	Emergency Management Agencies, Girard / Fairview Township	Emergency management agencies and / or local municipalities should consider obtaining temporary traffic control equipment to improve traffic operations and reduce back-ups under emergency detour traffic from the interstates; particularly at the intersection of US 20 and Route 18.

ID	Responsible Parties	Description
14	EMTA; City of Erie; Millcreek Township; Summit Township	Support EMTA Transit Expansion, as well as transit shelters and amenities on State Street, at Lowe's and Walmart on Peach Street and Robison Road. Transit pull-off locations desired on State Street, Peach Street, and 10th Street are listed in the Betterments section.
15	Girard Township	Girard Township to consider implementing a posted truck route or ordinance to route trucks away from residential neighborhoods and schools along Elk Park Road. Concerns were for safety and noise.
16	Harborcreek Township	Support construction of sidewalk connections to improve pedestrian safety walking between shopping centers and along Buffalo Road in Harborcreek Township.
17	Greater Erie Community Action Partnership	Support the re-establishment of the temporary job assistance / carpool shuttle service for impoverished residents who need to get to work locations not accessible through current transit schedules and routes
18	PennDOT; Countywide	Work on maintenance agreements between PennDOT and municipalities for sidewalks and trails to provide incentive for municipalities to improve multimodal infrastructure.
19	Edinboro Borough; Wayne Township	Include the Edinboro Wayne Park Trail on an official map to ensure that future development includes right-of-way for this community trail.
20	Erie MPO	Update Congestion Management Process (CMP) plan to address congestion in Erie County and traffic signal operations

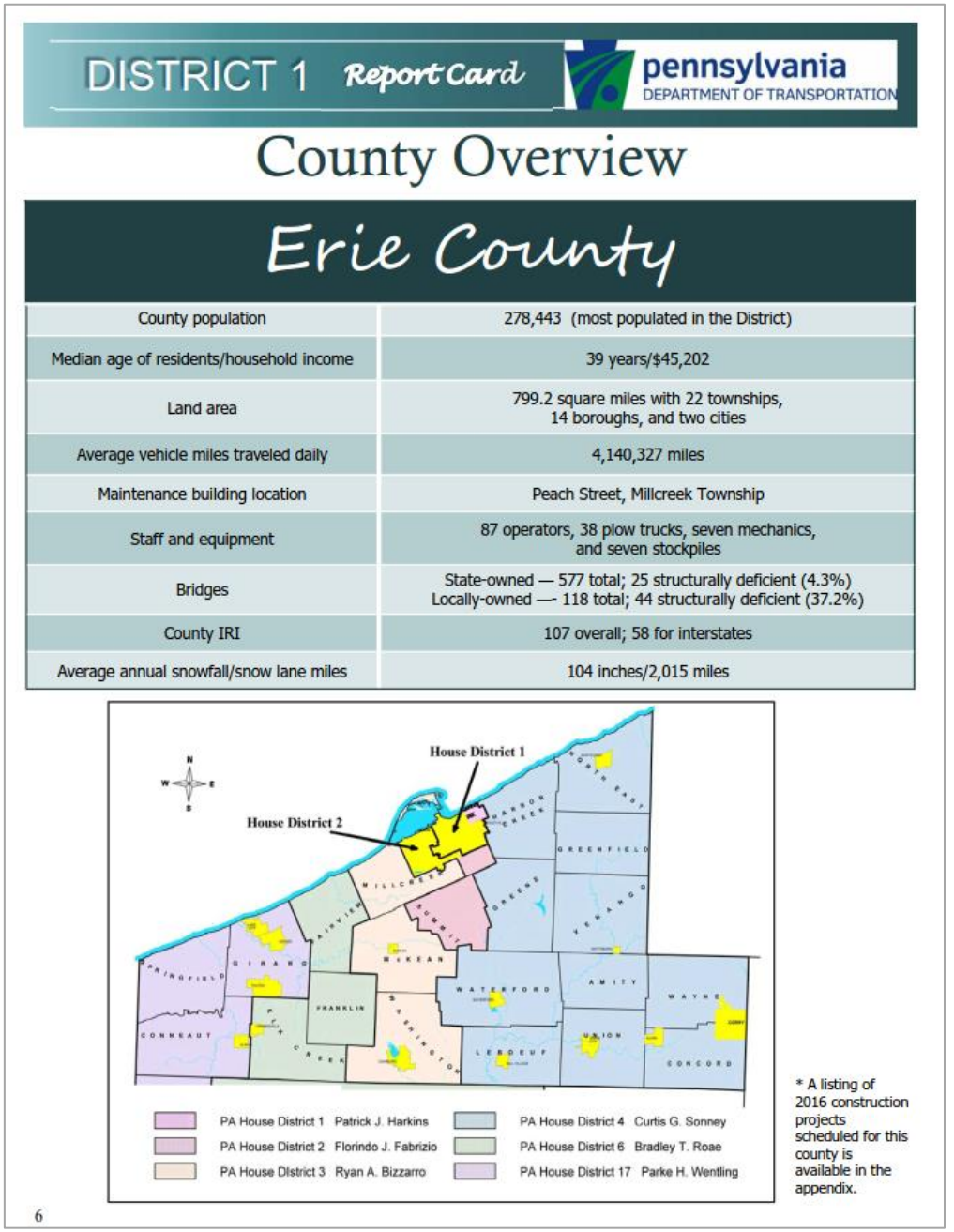
Implementation Evaluation

Prior federal legislation formalized the requirement for performance measurement, which is consistent with the overall **performance-based planning** approach used throughout the LRTP. The plan's goals and objectives, which provide a local focus on the Federal and Statewide planning requirements, were used in the project prioritization process to determine which projects help meet the community's goals and objectives. The performance measures developed for the plan take the next step and will act as a **report card** to determine if implementing the long-range plan has actually helped Erie County meet its goals and objectives:

1. Economic Vitality
2. Safety and Security
3. Multimodal Accessibility and Mobility
4. Freight Accessibility and Mobility
5. Sustainability
6. Project Feasibility
7. Congestion and Maintenance

The image on the right is an excerpt from PennDOT District 1's 2016 annual Report Card. District 1 reports on every county in its jurisdiction, including Crawford, Erie, Forest, Mercer, Venango, and Warren. Of particular interest on transportation infrastructure categories are structurally deficient bridges and countywide pavement quality.

A **practical,** implementable Report Card is the key for the Erie MPO to track its progress towards the above goals and objectives. The Erie MPO's Report Card has been developed to utilize data sources that are readily available. The Report Card should be checked at regular intervals to ensure that planning decisions are helping Erie achieve its goals. It references information from the PennDOT Annual Report Card on bridges and pavement quality. Other measures are recommended to be checked when the data is updated during the 2-year TIP cycle. Safety implementation measures such as crash data can only be reasonably checked after enough post-implementation data has been recorded; for example, a 5-year post-implementation time frame may be necessary to check if safety improvements have resulted in crash reductions. Falling short of a target should serve as a reminder that the MPO should support projects that work its goals and objectives. The Erie MPO's Report Card can be found in Appendix G.



DISTRICT 1 Report Card

pennsylvania DEPARTMENT OF TRANSPORTATION

County Overview

Erie County

County population	278,443 (most populated in the District)
Median age of residents/household income	39 years/$45,202
Land area	799.2 square miles with 22 townships, 14 boroughs, and two cities
Average vehicle miles traveled daily	4,140,327 miles
Maintenance building location	Peach Street, Millcreek Township
Staff and equipment	87 operators, 38 plow trucks, seven mechanics, and seven stockpiles
Bridges	State-owned — 577 total; 25 structurally deficient (4.3%) Locally-owned — 118 total; 44 structurally deficient (37.2%)
County IRI	107 overall; 58 for interstates
Average annual snowfall/snow lane miles	104 inches/2,015 miles

* A listing of 2016 construction projects scheduled for this county is available in the appendix.

6

Appendices

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Appendix A
Tourism Generators

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Appendix A - Tourism Generators*

Name	Type	Name	Type
6 Mile Cellars, Inc.	Winery	Lakeview Wine Cellars	Winery
Arrowhead Wine Cellars	Winery	LECOM	University
Arundel Cellars & Brewing Co	Winery	Maritime Museum	Museum
Asbury Woods Nature Center	Recreation	Mazza Vineyards	Winery
Bayfront Convention Center	Events	Mercyhurst University	University
Brown's Farm	Agriculture	Millcreek Mall	Shopping
Conneaut Creek	Fishing	Penn Shore Winery	Winery
Courtyard Winery	Winery	Penn State Behrend	University
Downing Golf Course	Recreation	Presque Isle Downs & Casino	Recreation
Edinboro Lake	Recreation	Presque Isle State Park	Recreation
Edinboro University	University	Presque Isle Wine Cellars	Winery
Eightmile Creek	Fishing	Raccoon Park	Recreation
Elk Creek Access	Fishing	Scott Park	Recreation
Erie Art Museum	Museum	Sevenmile Creek	Fishing
Erie Bluffs State Park	Recreation	Shades Beach	Recreation
Erie Insurance Arena	Events	Sixmile Creek	Fishing
Erie International Airport	Travel	Sixteenmile Creek	Fishing
Erie Zoo	Museum	South Shore Wine Company	Winery
Experience Childrens Museum	Museum	Splash Lagoon Water Park	Recreation
Family First Sports Park	Recreation	Tinseltown USA	Movies
Fourmile Creek	Fishing	Tom Ridge Environmental Center	Recreation
Freeport Beach	Recreation	Trout Run	Fishing
French Creek	Fishing	Twelvemile Creek	Fishing
Frontier Park	Recreation	Twentymile Creek	Fishing
Gannon University	University	Union City Dam	Recreation
Godfrey Run	Fishing	Upper Peach Street	Shopping
Green Meadows Golf Course	Recreation	Waldameer Park & Water World	Recreation
Heritage Wine Cellars	Winery	Walnut Creek Access Area	Fishing
Lake Erie Wine Country	Winery	Wintergreen Gorge	Recreation

*not an all-inclusive list of tourist destinations; list was sourced from unique locations that were reported from the Public Survey in fall 2016

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Appendix B
Decision Lens

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Appendix B - Decision Lens

Decision Lens Categories

Safety & Security	
Non-Motorized Crashes	What is the non-motorized crash frequency at or near the project location relative to countywide trends?
Motorized Crashes	What is the motorized crash frequency at or neat the project location relative to countywide trends?
Safety Improvement	Will the project improve safety on a route listed in the top-25 high crash locations in Erie County (HSIP, ISIP, RDIP) or local crash history?
Hazards	Will the project help to reduce hazards in school zones, at highway-rail crossings, or other sensitive areas?
Security	Will the project help to improve safety, reliability, or accessibility along emergency detour routes or improve emergency response times?
Traffic Congestion and Maintenance	
AADT	What is the estimated daily traffic volume at the project location?
Truck %	What is the overall percentage of medium/heavy duty commercial trucks at the project location?
Route Significance	Is the project located along the National Highway System, a Pennsylvania Byway, or other identified route of significance?
Existing Deficiency	Will the project address one or more maintenance or operational deficiencies (e.g., poor pavement quality, structurally deficient or height restricted bridge, inaccessible curb ramps, intersection delay, stormwater infrastructure or drainage issues, etc.)?
Economic Vitality	
Economic Benefit	To what extent will the project support planned developments or provide economic benefits (e.g., job growth, freight access, employee retention)
Interstate Access	Does the project improve interstate access directly (e.g. at an interchange) or indirectly (e.g. along a connecting route)?
Revitalization	Does the project positively affect multi-modal access, vehicular traffic operations, or streetscape enhancements in an area in need of revitalization?
Tourism	Will the project improve access to major attractions, tourist destinations, or similar assets within the county?
Recreation	To what extent might the project add, enhance, or otherwise benefit recreational opportunities for residents or visitors?
Feasibility	
Project Readiness	At what stage is the project in the planning process?
Right of Way and Utility	Is significant right-of-way, utility, or railroad coordination anticipated?
Planning Consistency	Is the project identified or supported by a municipal comprehensive plan or other locally-adopted plan or study?
Multimodal Accessibility & Mobility	
Pedestrian	To what extent will the project enhance pedestrian travel and related connections or opportunities?
Bicycle	To what extent will the project enhance bicycle travel and related connections or opportunities?
Public Transportation	To what extent will the project enhance public transportation and related connections or opportunities (e.g. park and ride, bus shelters)?
Sustainability	
Environmental Justice Area	Is the project located near an EJ population and/or will it otherwise provide distinct EJ benefits or enhancements, such as access to employment, recreation, or resources?
Environmental Resources	What is the anticipated potential of the project to impact environmental resources?
Freight Accessibility & Mobility	
Rail Service	Will the project enhance, expand or benefit passenger or freight-related rail service?
Air Travel	Will the project enhance, expand or benefit passenger or freight-related air travel?
Waterborne Transportation	Will the project enhance, expand, or benefit waterborne transportation or related port/dock/ramp access or opportunities?

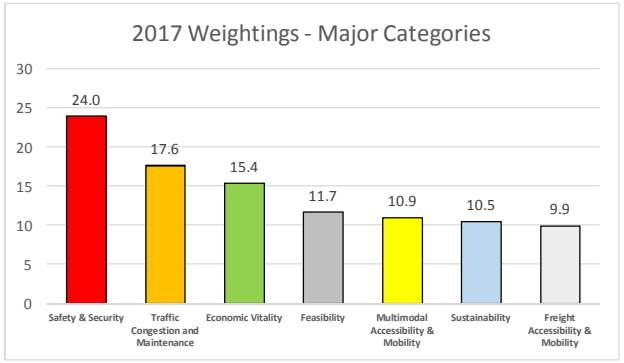
Appendix B - Decision Lens

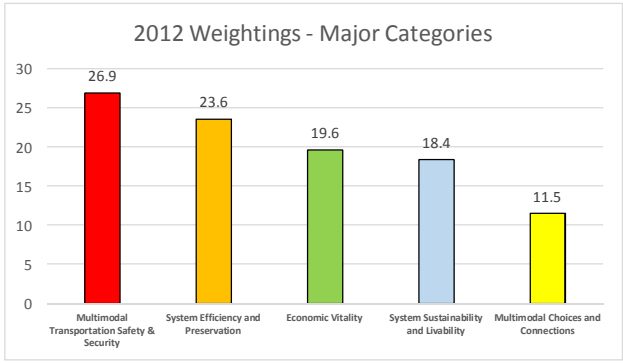
Decision Lens Comparison

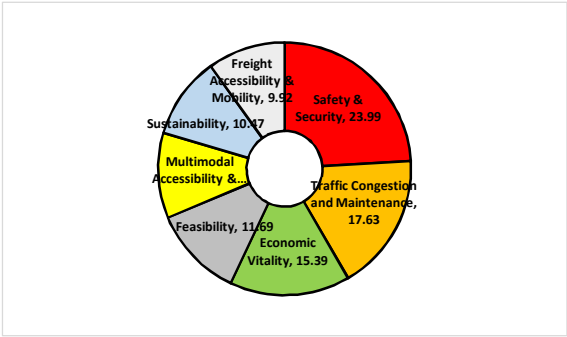
Summary: 2017 ranking similar to 2012's top three priorities: safety/security, congestion/maintenance, and economic vitality. Categories added/reorganized for 2017 update to better address the current local, state, & federal planning direction in the prioritization of projects.

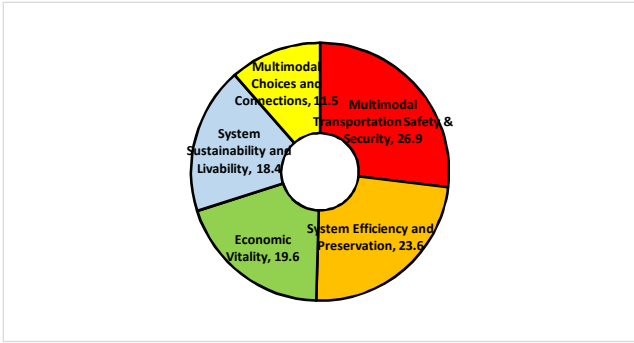
2017 Major Category Weightings	Weight	Rank
Safety & Security	23.99	1
Traffic Congestion and Maintenance	17.63	2
Economic Vitality	15.39	3
Feasibility	11.69	4
Multimodal Accessibility & Mobility	10.92	5
Sustainability	10.47	6
Freight Accessibility & Mobility	9.92	7

2012 Major Category Weightings	Weight	Rank
Multimodal Transportation Safety & Security	26.9	1*
System Efficiency and Preservation	23.6	2
Economic Vitality	19.6	3
System Sustainability and Livability	18.4	4
Multimodal Choices and Connections	11.5	5









Appendix B - Decision Lens

Decision Lens Weightings (Accepted by EATS MPO 1/18/17)

DECISION LENS

Generated on 01-17-2017 @ penndot-dl3.decisionlens.com
Portfolio: Erie County Long Range Transportation Plan 2017
Portfolio Goal: To ensure consistency in the prioritization of transportation projects that will address transportation needs in Erie County.

First Level	Subcategory Weight (%)	Category Weight (%)
Safety & Security		
Non-Motorized Crashes	2.72	23.99
Motorized Crashes	4.81	
Safety Improvement	8.42	
Hazards	4	
Security	4.04	
Traffic Congestion and Maintenance		
AADT	4.2	17.63
Truck %	2.89	
Route Significance	2.69	
Existing Deficiency	7.85	
Economic Vitality		
Economic Benefit	4.88	15.39
Interstate Access	2.14	
Revitalization	3.99	
Tourism	1.78	
Recreation	2.6	
Feasibility		
Project Readiness	3.51	11.69
Right of Way and Utility	3.42	
Planning Consistency	4.76	
Multimodal Accessibility & Mobility		
Pedestrian	4.89	10.92
Bicycle	3.2	
Public Transportation	2.83	
Sustainability		
Environmental Justice Area	5.97	10.47
Environmental Resources	4.51	
Freight Accessibility & Mobility		
Rail Service	4.03	9.92
Air Travel	4.2	
Waterborne Transportation	1.69	

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Appendix C
Performance Evaluation

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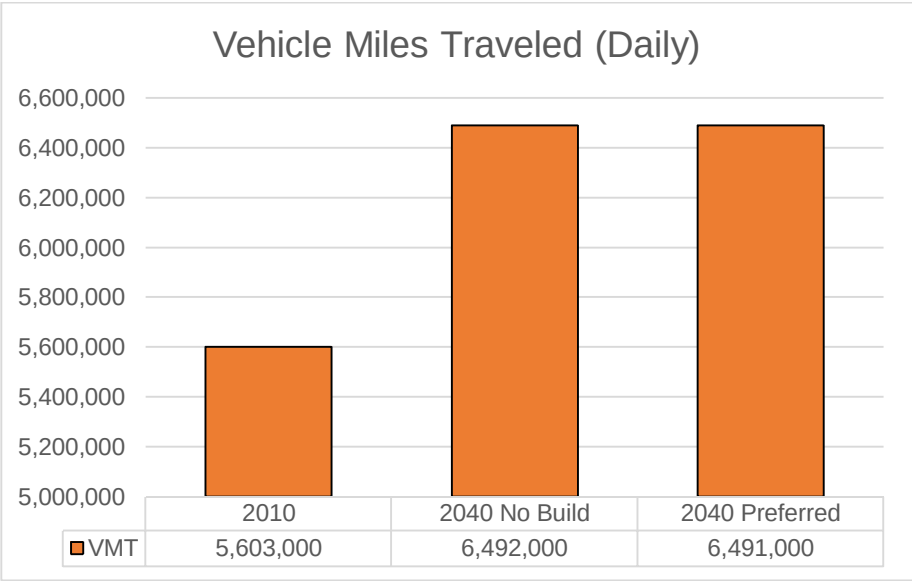
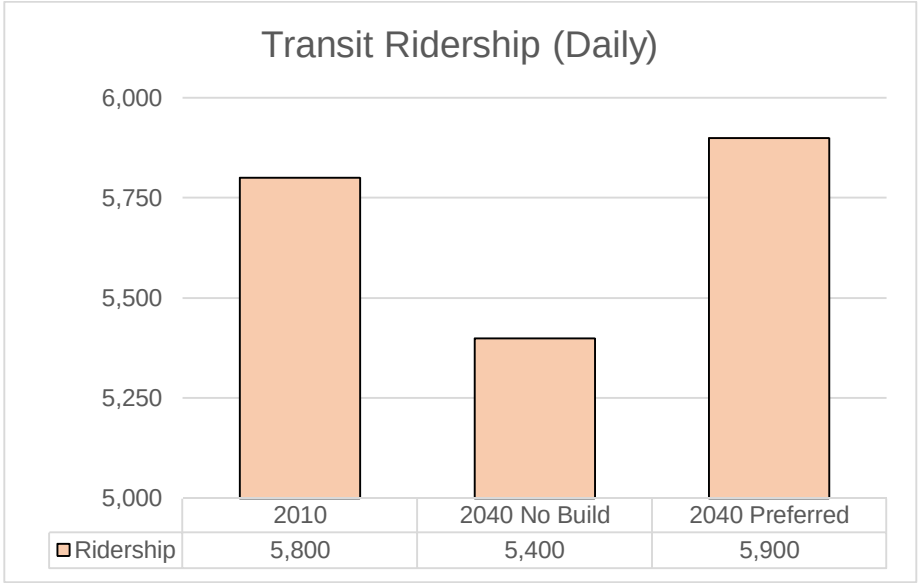
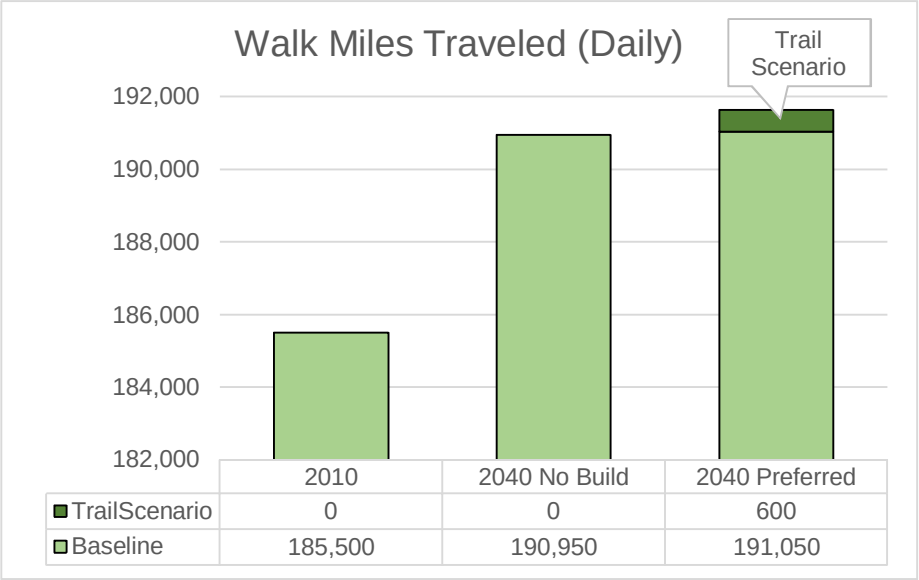
Vehicle Miles Traveled



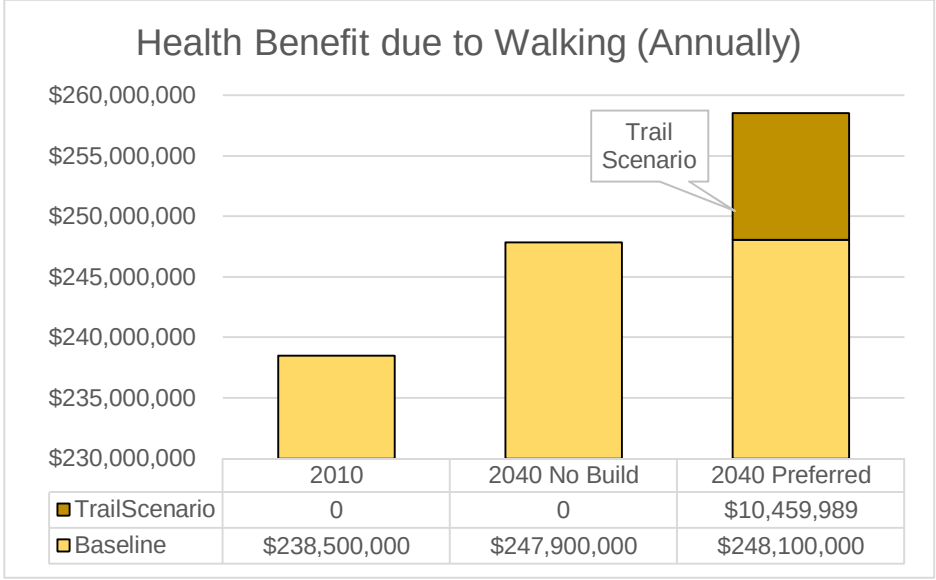
Transit Ridership



Walk Miles Traveled (Daily)



Health Benefit for Walking



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Appendix D
Funding Sources

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SURFACE TRANSPORTATION BLOCK GRANT (STBG)

TABLE OF CONTENTS

PROGRAM PURPOSE

The Fixing America's Surface Transportation (FAST) Act converts the long-standing Surface Transportation Program (STP) into the Surface Transportation Block Grant Program (STBG) acknowledging that this program has the most flexible eligibilities among all Federal-aid highway programs and aligning the program's name with how the Federal Highway Administration (FHWA) has historically administered it. The STBG promotes flexibility in State and local transportation decisions and provides flexible funding to best address State and local transportation needs. (FAST Act § 1109(a))

GOVERNING AUTHORITIES

Section 1101 of the FAST Act authorizes funds for the STBG.

Section 1104 of the FAST Act provides for apportionment of funds under 23 U.S.C. 104.

Section 1109 of the FAST Act amends 23 U.S.C. 133.

Section 1111 of the FAST Act amends 23 U.S.C. 144 for Bundling of Bridge Projects.

Section 1407 of the FAST Act amends 23 U.S.C. 133 for an additional eligibility.

Section 1437 of the FAST Act provides for Border State Infrastructure.

Section 1446 of the FAST Act amends title 23, United States Code, for technical corrections.

FUNDING

Authorization Levels: Estimated annual STBG funding under the FAST Act is:

Estimated Annual STBG Funding

FY 2016	$11.162 B
FY 2017	$11.424 B
FY 2018	$11.667 B
FY 2019	$11.876 B
FY 2020	$12.136 B

23 U.S.C. 133(h) sets aside funding for projects and activities that were described in 23 U.S.C. 101(a)(29) or 213 before the enactment of the FAST Act. FHWA is calling this set aside the “Transportation Alternatives Set-Aside” or “TA Set-Aside.” The TA Set-Aside guidance is accessible on the FAST Act Web site (https://www.fhwa.dot.gov/fastact/) and through the FHWA Policy and Guidance Center

The FAST Act distributes formula funds annually based on the amounts of formula funds each State received under the Moving Ahead for Progress in the 21st Century (MAP-21) Act. The methodology for making the apportionments under 23 U.S.C. 104 is discussed in FHWA Notice 4510.802.

From the State’s STBG apportionment, the following sums are to be set aside:

2 percent for State Planning and Research (SPR). (23 U.S.C. 505, as amended by the FAST Act)

Bridges not on Federal-aid highways ("off-system g"). See Section G below.

Border State Infrastructure projects. See Section I below.

TA Set-Aside under 23 U.S.C. 133(h). See separate TA Set-Aside guidance.

The Fiscal Management Information System Program Codes for these STBG funds are as follows:

Program Code Program Description Statutory Reference

Z240 Surface Transportation Program (STBG) Flex

23 U.S.C. 133(d)(1)(B)

Z230 STBG - Urbanized Areas With Population Over 200K

23 U.S.C. 133(d)(1)(A)(i)

Z231 STBG - Areas with Population Over 5K to 200K

23 U.S.C. 133(d)(1)(A)(iii)

Z232 STBG - Areas with Population 5K and Under

23 U.S.C. 133(d)(1)(A)(ii)

Z233 STBG Off-System Bridge

23 U.S.C. 133(f)(2)

Z234 Special Rule for Areas of 5,000 or Less Population 23 U.S.C. 133(g)(2)

Z500 STBG - Border State Infrastructure FAST 1437(a)

Z300 TA Set-Aside - Flex 23 U.S.C. 133(h)(2)

Z301 TA Set-Aside - Urbanized Areas With Population Over 200K 23 U.S.C. 133(h)(2)

Z302 TA Set-Aside - Areas with Population Over 5K to 200K 23 U.S.C. 133(h)(2)

Z303 TA Set-Aside - Areas with Population 5K and Under23 U.S.C. 133(h)(2)

Z304 TA Set-Aside - Large Urbanized areas 50% for any STBG purpose 23 U.S.C. 133(h)(6)(B)

Z940 Recreational Trails Program (RTP) 23 U.S.C. 133(h)(5)

Z941 Return of 1% for RTP Administration 23 U.S.C. 133(h)(5)(B)

ZR10 State RTP Administration 23 U.S.C. 206(d)(2)(H)

ZR20 RTP Educational Programs 23 U.S.C. 206(d)(2)(G)

Period of Availability: STBG funds are contract authority. STBG obligations are reimbursed from the Highway Account of the Highway Trust Fund. STBG funds are available for obligation for a period of 3 years after the last day of the fiscal year for which the funds are authorized. Thus funds are available for obligation for up to 4 years. (23 U.S.C. 118)

Obligation Limitation: STBG funds are subject to the annual obligation limitation imposed on the Federal-aid highway program.

Federal Share: The Federal share is governed by 23 U.S.C. 120. It is generally 80 percent. The Federal share for projects on the Interstate System is 90 percent unless the project adds lanes that are not high-occupancy-vehicle or auxiliary lanes. For projects that add single occupancy vehicle capacity, that portion of the project will revert to the 80 percent level. An upward sliding scale adjustment is available to States having public lands (https://www.fhwa.dot.gov/legsregs/directives/notices/n4540-12.cfm). States may use a lower Federal share on Federal-aid projects as provided in 23 U.S.C. 120.

Certain types of improvements, predominantly safety improvements, listed in 23 U.S.C. 120(c)(1) may have a Federal share of 100 percent. Use of this provision is limited to 10 percent of the total funds apportioned to a State under 23 U.S.C. 104. See FHWA Memo, “Increased Federal Share under 23 U.S.C. 120(c)(1),” dated November 25, 2014 (https://www.fhwa.dot.gov/federalaid/141125.cfm).

23 U.S.C. 120(f) allows funds apportioned under 23 U.S.C. 104 to be used at 100 percent Federal share for Federal-aid highways within Indian reservations, national parks, and monuments.

The Federal share for workforce development, training, and education activities carried out with STBG funds under 23 U.S.C. 504(e)(1)(A)-(F) is 100 percent. Under 23 U.S.C. 504(b)(3)(A)(ii), STBG funds can be used as the non-Federal share to match the 50 ercent Federal share for projects funded by the Local Technical Assistance Program.

The Federal share for projects located on toll roads and subject to the provisions of 23 U.S.C. 129 is limited to 80 percent.

Section 1435 of the FAST Act amended Section 1528 of MAP-21 concerning the Federal share for Appalachian Development Highway System (ADHS) projects as provided in 40 U.S.C. 14501. For FY 2012 through 2050, the Federal share for local access roads and ADHS projects that contribute to the completion of the ADHS and are included in the latest approved Cost to Complete Estimate, may be up to 100 percent, as determined by the State. Work on completed segments of the ADHS or a section that was listed as ineligible in the latest approved Cost to Complete Estimate could be eligible for the National Highway Performance Program (NHPP) or STBG funds but only at a Federal share specified in 23 U.S.C. 120.

Projects incorporating Innovative Project Delivery as described in 23 U.S.C. 120(c)(3) may be increased by up to 5 percent of the total project cost not to exceed a 100 percent Federal share, subject to limitations in 23 U.S.C. 120(c)(3). (FAST Act §1408(a))

Transferability of STBG Funds: 23 U.S.C. 126 (Transferability of Federal-aid highway funds) provides for and has conditions on the transfer of funds apportioned under 23 U.S.C. 104(b). Transferred funds are to be obligated for the same purposes and to meet the same requirements of the category to which they were transferred. See FHWA Order 4551.1, "Fund Transfers to Other Agencies and Among Title 23 Programs," dated August 12, 2013 (https://www.fhwa.dot.gov/legsregs/directives/orders/45511.cfm).

The following STBG funds have transferability restrictions:

Funds suballocated under 23 U.S.C. 133(d)(1)(A) may not be transferred. See Section E below.

Funds suballocated under 23 U.S.C. 133(h) have transfer restrictions. See separate TA Set-Aside guidance.

ELIGIBILITY

Eligible Projects and Activities:

Location of Projects (23 U.S.C. 133(c)): STBG projects may not be undertaken on a road functionally classified as a local road or a rural minor collector unless the road was on a Federal-aid highway system on January 1, 1991, except-

(1) For a bridge or tunnel project (other than the construction of a new bridge or tunnel at a new location);

(2) For a project described in 23 U.S.C. 133(b)(4)-(11) and described below under "Eligible Activities" (b)(4) through (11);

(3) For transportation alternatives projects described in 23 U.S.C. 101(a)(29) before enactment of the FAST Act (these are described in 23 U.S.C. 133(h) and in separate TA Set-Aside guidance.); and

(4) As approved by the Secretary.

Eligible Activities (23 U.S.C. 133(b)): Subject to the location of projects requirements in paragraph (a), the following eligible activities are listed in 23 U.S.C. 133(b):

(1) Construction, as defined in 23 U.S.C. 101(a)(4), of the following:

i. Highways, bridges, and tunnels, including designated routes of the Appalachian development highway system and local access roads under 40 U.S.C. 14501;

ii. Ferry boats and terminal facilities eligible under 23 U.S.C. 129(c);

iii. transit capital projects eligible under chapter 53 of title 49, United States Code;

iv. Infrastructure-based intelligent transportation systems capital improvements, including the installation of vehicle-to-infrastructure communication equipment;

v. Truck parking facilities eligible under Section 1401 of MAP-21 (23 U.S.C. 137 note); and

vi. Border infrastructure projects eligible under Section 1303 of SAFETEA- LU (23 U.S.C. 101 note).

(2) Operational improvements and capital and operating costs for traffic monitoring, management, and control facilities and programs. Operational improvement is defined in 23 U.S.C. 101(a)(18).

(3) Environmental measures eligible under 23 U.S.C. 119(g), 328, and 329, and transportation control measures listed in Section 108(f)(1)(A) (other than clause (xvi) of that section) of the Clean Air Act (42 U.S.C. 7408(f)(1)(A)).

(4) Highway and transit safety infrastructure improvements and programs, including railway-highway grade crossings.

(5) Fringe and corridor parking facilities and programs in accordance with 23 U.S.C. 137 and carpool projects in accordance with 23 U.S.C. 146. Carpool project is defined in 23 U.S.C. 101(a)(3).

(6) Recreational trails projects eligible under 23 U.S.C. 206, pedestrian and bicycle projects in accordance with 23 U.S.C. 217 (including modifications to comply with accessibility requirements under the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.)), and the Safe Routes to School Program under Section 1404 of SAFETEA-LU (23 U.S.C. 402 note).

(7) Planning, design, or construction of boulevards and other roadways largely in the right-of-way of former Interstate System routes or other divided highways.

(8) Development and implementation of a State asset management plan for the National Highway System (NHS) and a performance-based management program for other public roads.

(9) Protection (including painting, scour countermeasures, seismic retrofits, impact protection measures, security countermeasures, and protection against extreme events) for bridges (including approaches to bridges and other elevated structures) and tunnels on public roads, and inspection and evaluation of bridges and tunnels and other highway assets.

(10) Surface transportation planning programs, highway and transit research and development and technology transfer programs, and workforce development, training, and education under chapter 5 of title 23, United States Code.

(11) Surface transportation infrastructure modifications to facilitate direct intermodal interchange, transfer, and access into and out of a port terminal.

(12) Projects and strategies designed to support congestion pricing, including electronic toll collection and travel demand management strategies and programs.

(13) Upon request of a State and subject to the approval of the Secretary, if Transportation Infrastructure Finance and Innovation Act (TIFIA) credit assistance is approved for an STBG-eligible project, then the State may use STBG funds to pay the subsidy and administrative costs associated with providing Federal credit assistance for the projects.

(14) The creation and operation by a State of an office to assist in the design, implementation, and oversight of public-private partnerships eligible to receive funding under title 23 and chapter 53 of title 49, United States Code, and the payment of a stipend to unsuccessful private bidders to offset their proposal development costs, if necessary to encourage robust competition in public-private partnership procurements.

(15) Any type of project eligible under 23 U.S.C. 133 as in effect on the day before the FAST Act was enacted. Among these are:

i. Replacement of bridges with fill material;

ii. Training of bridge and tunnel inspectors;

iii. Application of calcium magnesium acetate, sodium acetate/formate, or other environmentally acceptable, minimally corrosive anti-icing and deicing compositions for bridges (and approaches to bridges and other elevated structures) and tunnels;

iv. Projects to accommodate other transportation modes continue to be eligible pursuant to 23 U.S.C. 142(c) if such accommodation does not adversely affect traffic safety;

v. Transit capital projects eligible for assistance under chapter 53 of title 49, United States Code, including vehicles and facilities (publicly or privately owned) that are used to provide intercity passenger bus service;

vi. Approach roadways to ferry terminals to accommodate other transportation modes and to provide access into and out of the ports;

vii. Transportation alternatives previously described in 23 U.S.C. 101(a)(29) and described in 23 U.S.C. 213;

viii. Projects relating to intersections having disproportionately high accident rates, high levels of congestion (as evidenced by interrupted traffic flow at the intersection and a level of service rating of "F" during peak travel hours, calculated in accordance with the Highway Capacity Manual), and are located on a Federal-aid highway;

ix. Construction and operational improvements for any minor collector if the minor collector and the project to be carried out are in the same corridor and in proximity to an NHS route; the construction or improvements will enhance the level of service on the NHS route and improve regional traffic flow; and the construction or improvements are more cost-effective, as determined by a benefit-cost analysis, than an improvement to the NHS route;

x. Workforce development, training, and education activities discussed in 23 U.S.C. 504(e);

xi. Advanced truck stop electrification systems. Truck stop electrification system is defined in 23 U.S.C. 101(a)(32);

xii. Installation of safety barriers and nets on bridges, hazard eliminations, projects to mitigate hazards caused by wildlife;

xiii. Electric vehicle and natural gas vehicle infrastructure in accordance with 23 U.S.C. 137;

xiv. Data collection, maintenance, and integration and the costs associated with obtaining, updating, and licensing software and equipment required for risk-based asset management and performance based management, and for similar activities related to the development and implementation of a performance based management program for other public roads;

xv. Construction of any bridge in accordance with 23 U.S.C. 144(f) that replaces any low water crossing (regardless of the length of the low water crossing); any bridge that was destroyed prior to January 1, 1965; any ferry that was in existence on January 1, 1984; or any road bridge that is rendered obsolete as a result of a Corps of Engineers flood control or channelization project and is not rebuilt with funds from the Corps of Engineers. Not subject to the Location of Project requirement in 23 U.S.C. 133(c); and

xvi. Actions in accordance with the definition and conditions in 23 U.S.C. 144(g) to preserve or reduce the impact of a project on the historic integrity of a historic bridge if the load capacity and safety features of the historic bridge are adequate to serve the intended use for the life of the historic bridge. Not subject to the Location of Project requirement in 23 U.S.C. 133(c).

Applicability of Planning Requirements (23 U.S.C. 133(d)(5)): Projects must be identified in the Statewide Transportation Improvement Program (STIP)/Transportation Improvement Program (TIP) and be consistent with the Long-Range Statewide Transportation Plan and the Metropolitan Transportation Plan(s). When obligating suballocated funding (discussed below), the State must coordinate with relevant metropolitan planning organizations (MPO) or rural planning organizations (23 U.S.C. 133(d)(3)). Programming and expenditure of funds for projects shall be consistent with 23 U.S.C. 134 and 135.

STBG projects for eligible planning purposes must be reflected in the statewide SPR work program or Metropolitan Unified Planning Work Program. Further, these projects must be in the STIP/TIP unless the State DOT or MPO agree that they may be excluded. (23 CFR 420.119(e))

Applicability of 23 U.S.C. 217(i) for Bicycle Projects: 23 U.S.C. 217(i) requires that bicycle facilities “be principally for transportation, rather than recreation, purposes.” However, 23 U.S.C. 133(b)(6) and 133(h) list “recreational trails projects” as eligible activities under STBG. Therefore, the requirement in 23 U.S.C. 217(i) does not apply to recreational trails projects (including for bicycle use) using STBG funds. Section 217(i) continues to apply to bicycle facilities other than trail-related projects, and Section 217(i) continues to apply to bicycle facilities using other Federal-aid highway program funds (e.g., NHPP, Highway Safety Improvement Program, and Congestion Mitigation and Air Quality Improvement Program). The transportation requirement under Section 217(i) is applicable only to bicycle projects; it does not apply to any other trail use or transportation mode.

SUBALLOCATION (23 U.S.C. 133(d))

After setting aside funds for SPR and the TA Set-Aside, a percentage of a State's STBG apportionment is suballocated to areas of the State based on their relative share of the State's population. This percentage varies from 51 percent in 2016 to 55 percent in 2020, as shown in the table below. The remainder of STBG funds may be used anywhere in the State.

STBG suballocation based on relative share of State population

Fiscal Year	Percent Suballocated
2016	51%
2017	52%
2018	53%
2019	54%
2020	55%

The suballocated funds are divided into three categories:

Urbanized areas of the State with a population over 200,000. These funds are distributed among the individual areas based on their relative share of the population. The State and the relevant MPOs may jointly apply to the FHWA division office for permission to base the distribution on other factors. These funds may be obligated in the metropolitan area established under 23 U.S.C. 134 that encompasses the urbanized area. (23 U.S.C. 133(d)(2))

Over the period of FYs 2016-2020, each State must provide obligation limitation to the urbanized areas with a population over 200,000 for use with their suballocated STBG funds. Over that period, the amount of obligation limitation provided to each urbanized area must be equal to the amount obtained by multiplying the total amount of contract authority suballocated to the area by the ratio of the total amount of obligation authority distributed to the State for the 5-year period to the total of apportionments to the State for that period (excluding amount exempt from the limitation). Each State, each affected MPO, and the Secretary of transportation must jointly ensure compliance with this requirement. (23 U.S.C. 133(e))

Areas of the State with a population of 5,000 or less. See also Section F below.

Areas of the State with a population of 5,001 to 200,000. Prior to obligating funds attributed to an area of this type, the State must consult with the regional transportation planning organizations that represent the area, if there are any. (23 U.S.C. 133(d)(3))

SPECIAL RULE FOR AREAS OF 5,000 OR LESS POPULATION (23 U.S.C. 133(g))

In each of FYs 2016 through 2020, a State may obligate up to 15 percent of the STBG amounts suballocated for that year for use in areas with a population of 5,000 or less on roads functionally classified as minor collectors. For areas of 5,000 or less, the construction of a new bridge or tunnel at a new location on a rural minor collector is eligible for STBG funding, subject to the overall 15 percent limit. The Secretary may suspend this special rule with respect to a State if the FHWA division office determines that this authority is being used excessively by the State.

BRIDGES NOT ON FEDERAL-AID HIGHWAYS (23 U.S.C. 133(f))

An off-system bridge is a highway bridge located on a public road that is not a Federal-aid highway. 23 U.S.C. 133(f)(2)(A) sets aside from the STBG an amount equal to 15 percent of Highway Bridge Program funds apportioned to the State for FY 2009 for activities for off-system bridges. Funding pursuant to this provision is provided to the States with a specific program code, as shown in the program code table in this guidance. Eligible activities for the set aside for off-system bridges are replacement (including replacement with fill material), rehabilitation, preservation, protection (including painting, scour countermeasures, seismic retrofits, impact protection measures, security countermeasures, and protection against extreme events) and application of calcium magnesium acetate, sodium acetate/formate, or other environmentally acceptable, minimally corrosive anti-icing and deicing compositions for bridges (and approaches to bridges and other elevated structures) and tunnels on public roads of all functional classifications, including any such construction or reconstruction necessary to accommodate other transportation modes.[1] A State may choose to expend funds in excess of the off-system set-aside.

The FHWA Administrator may reduce the requirement for expenditures for off-system bridges if the FHWA Administrator, after consultation with State and local officials, determines that the State has inadequate needs to justify the expenditure. See the following memoranda:

Special Rule for Bridges Not on Federal-Aid Highways (Surface Transportation Program of MAP-21), dated October 17, 2012 (https://www.fhwa.dot.gov/bridge/121017.cfm); and

Highway Bridge Program, Off-System Bridges - Reduction of Expenditures, dated June 11, 2007 (https://www.fhwa.dot.gov/bridge/070611.cfm).

The credit for bridges not on Federal-aid highways under 23 U.S.C. 133(f)(3) is continued. Up to 80 percent of the construction cost incurred from bridge replacement and rehabilitation projects that are wholly funded from State and local sources and are not on Federal-aid highways may be credited to the non-Federal share of Federal-aid bridge projects. Credits may be earned if the "source" bridge project is:

Non-controversial;

Certified by the State to have been carried out in accordance with all standards applicable to such projects under 23 U.S.C. 133; and

Determined by the Secretary upon completion to be no longer a deficient bridge.

The “source” bridge project is not required to satisfy typical Federal-aid requirements, such as National Environmental Policy Act clearance and the Uniform Relocation Assistance and Real Property Acquisition Policies Act. Additionally, the phrase “applicable standards” refers to State laws, regulations, directives, safety standards, and construction standards.

BUNDLING OF BRIDGE PROJECTS (23 U.S.C. 144(j))

This provision encourages States to save costs and time by bundling multiple eligible bridges into one project using STBG or NHPP funds under one project agreement.

By law, each bridge project to be included in a bundle to be funded from STBG funds must:

Have the same financial characteristics, such as the same funding category or subcategory and the same Federal share;

Be eligible under 23 U.S.C. 133;

Be included as a single bundled project in the applicable TIP or STIP; and

Be awarded to a single consultant or contractor pursuant to a contract for engineering and design or construction between the contractor and an eligible entity.

Bundled bridge projects carried out under 23 U.S.C. 144(j) are exempt from the payback provisions of 23 U.S.C. 102(b).

BORDER STATE INFRASTRUCTURE (FAST Act § 1437)

Section 1437 of the FAST Act allows the Governor of a State that shares a land border with Canada or Mexico to designate for each fiscal year not more than 5 percent of STBG funds made available for any area of the State under 23 U.S.C. 133(d)(1)(B), for border infrastructure projects eligible under Section 1303 of SAFETEA-LU (Coordinated Border Infrastructure Program). Projects must meet the requirements of Section 1303. Before making such designation, the Governor must certify that the designation is consistent with transportation planning requirements under title 23, United States Code. Funding pursuant to this provision is provided to applicable States with a specific program code, as shown in the program code table in this guidance. Note that border infrastructure projects may be funded with any STBG funds, not just from the set-aside designated by the Governor. See the FAST Act's Questions and Answers on Border State Infrastructure (https://www.fhwa.dot.gov/hep/guidance/section1437.cfm).

TREATMENT OF PROJECTS (23 U.S.C. 133(i))

Projects funded under 23 U.S.C. 133, including projects carried out under the TA Set-Aside under 23 U.S.C. 133(h), but excluding Recreational Trails Program (RTP) projects carried out under 23 U.S.C.133(h)(5), shall be treated as projects on a Federal-aid highway.

This subjects all STBG projects (excluding the RTP set-aside) to, among other things, Davis-Bacon Act prevailing wage requirements and other Federal-aid requirements (e.g., Buy America, planning, environmental review, letting, etc.).

However, Section 1524 of MAP-21 remains in effect. It provided exceptions to certain requirements regarding pay rates and contracting requirements for projects using qualified youth service or conservation corps. This provision requires the DOT/FHWA to "encourage the States and regional transportation planning agencies to enter into contracts and cooperative agreements with qualified youth service or conservation corps. . . to perform appropriate projects eligible under Sections 162, 206, [former] 213, and 217 of title 23, United States Code, and under Section 1404 of the SAFETEA-LU." These projects include scenic byways, recreational trails, transportation alternatives, bicycle and pedestrian, and safe routes to school. Section 1524 of MAP-21 applies to any projects eligible under these sections, including projects developed with other Federal-aid highway program funds. See the MAP-21 Questions and Answers (https://www.fhwa.dot.gov/map21/qandas/qayscc.cfm) and Youth Workforce Development Resources. (https://www.fhwa.dot.gov/environment/transportation_alternatives/guidance/youth_workforcedev.cfm)

To the extent the requirements of 23 U.S.C. 133 relating to Treatment of Projects conflicts with the express provisions in Section 1524, the provisions in Section 1524 prevail because they are more specific than the general provision of 23 U.S.C. 133(i).

TRANSPORTATION ALTERNATIVES SET-ASIDE (23 U.S.C. 133(h))

See the "Transportation Alternatives Set-Aside" or "TA Set-Aside" guidance on the FAST Act website (https://www.fhwa.dot.gov/fastact/) and through the FHWA Policy and Guidance Center.

TRANSPORTATION ALTERNATIVES (TA) Set-Aside

PROGRAM PURPOSE

The Fixing America's Surface Transportation (FAST) Act replaced the Transportation Alternatives Program (TAP) with a set-aside of Surface Transportation Block Grant (STBG) Program funding for transportation alternatives (TA). These set-aside funds include all projects and activities that were previously eligible under TAP, encompassing a variety of smaller-scale transportation projects such as pedestrian and bicycle facilities, recreational trails, safe routes to school projects, community improvements such as historic preservation and vegetation management, and environmental mitigation related to stormwater and habitat connectivity. The Moving Ahead for Progress in the 21st Century Act (MAP-21) codified the TAP under sections 213(b) and 101(a)(29) of title 23, United States Code (U.S.C.). The FAST Act repealed section 213, removed the former 101(a)(29), and recodified the program (as a set-aside of STBG funding) under 23 U.S.C. 133(h). For administrative purposes, the Federal Highway Administration (FHWA) is calling these funds the "Transportation Alternatives Set-Aside" or "TA Set-Aside."

GOVERNING AUTHORITIES

- Section 1101 of the FAST Act authorized funds for the STBG.
- Section 1104 of the FAST Act provided for apportionment of funds under 23 U.S.C. 104.
- Section 1109 of the FAST Act amended the STBG under 23 U.S.C. 133, and established the TA Set-Aside under 23 U.S.C. 133(h).
- Section 1446 of the FAST Act amended title 23 U.S.C. with technical corrections.

FUNDING

Authorization Levels under the FAST Act: Estimated annual STBG funding under the FAST Act is listed in the STBG Guidance, Section C, Funding. Section 1104 of the FAST Act provides for the reservation of funds apportioned to a State under 23 U.S.C. 104(b)(2) to carry out the TA Set-Aside under 23 U.S.C. 133(h). Each State's TA SetAside funding is determined by dividing the national total TA Set-Aside funds shown in the table below among the States based on each State's proportionate share of FY 2009 Transportation Enhancements funding. See the FAST Act Funding Tables. The following table shows the national total for the TA Set-Aside under the FAST Act: Fiscal Year Transportation Alternatives Funds (23 U.S.C. 133(h))

- FY 2016 $835,000,000
- FY 2017 $835,000,000
- FY 2018 $850,000,000
- FY 2019 $850,000,000
- FY 2020 $850,000,000

The Program Codes for the TA Set-Aside funds are as follows: Page 4 of 18 Program Code Program Description Statutory Reference Z300 TA Set-Aside – Flex 23 U.S.C. 133(h)(2) Z301 TA Set-Aside – Urbanized Areas With Population Over 200,000 23 U.S.C. 133(h)(2) Z302 TA Set-Aside – Areas with Population Over 5,000 to 200,000 23 U.S.C. 133(h)(2) Z303 TA Set-Aside – Areas with Population 5,000 and Under 23 U.S.C. 133(h)(2) Z304 TA Set-Aside – Large Urbanized areas 50% for any STBG purpose 23 U.S.C. 133(h)(6)(B) Z940 Recreational Trails Program (RTP) 23 U.S.C. 133(h)(5) Z941 Return of 1% for RTP Administration 23 U.S.C. 133(h)(5)(B) ZR10 State RTP Administration 23 U.S.C. 206(d)(2)(H) ZR20 RTP Educational Programs 23 U.S.C. 206(d)(2)(G) For other Program Codes, including MAP-21 extension codes, see Apportioned Program Codes under the FAST Act. Period of Availability: TA Set-Aside funds are contract authority. TA Set-Aside obligations are reimbursed from the Highway Account of the Highway Trust Fund. TA Set-Aside funds are available for obligation for a period of 3 years after the last day of the fiscal year for which the funds are authorized. This includes funds set aside for the Recreational Trails Program (RTP). Thus, funds are available for obligation for up to 4 years (23 U.S.C. 118). Surface Transportation Program (STP), TAP, and RTP funds from previous authorizations continue to be available for their original period of availability (3 years after the last day of the fiscal year for which the funds were authorized (23 U.S.C. 118)), but new obligations of STP, TAP, and RTP funds must follow the requirements and eligibilities of 23 U.S.C. 133, as amended by the FAST Act. See Treatment of Carryover Funds Under the FAST Act. Funds apportioned for the Safe Routes to School (SRTS) Program prior to MAP-21 are available until expended (SAFETEA-LU § 1404(i)). Obligation Limitation: The TA Set-Aside funds are subject to the annual obligation limitation imposed on the Federal-aid Highway Program. Federal Share and Match: The Federal share for TA Set-Aside projects is as follows: • For most projects, including SRTS projects funded with

TA Set-Aside funds, the Federal share is the same as the Federal-aid Highway Program under 23 U.S.C. 120: generally 80 percent Federal and 20 percent State or local match. An upward sliding scale adjustment is available to States having public lands (23 U.S.C. 120). • States may use a lower Federal share on Federal-aid projects as provided in 23 U.S.C. 120. • Certain types of improvements, predominantly safety improvements, listed in 23 U.S.C. 120(c)(1) may have a Federal share of 100 percent. Use of this provision is limited to 10 Page 5 of 18 percent of the total funds apportioned to a State under 23 U.S.C. 104. See FHWA's Memo, Increased Federal Share under 23 U.S.C. 120(c)(1), dated November 25, 2014, for examples. • 23 U.S.C. 120(f) allows funds apportioned under 23 U.S.C. 104 to be used at 100 percent Federal share for Federal-aid highways within Indian Reservations, and national parks and monuments. • 23 U.S.C. 120(j) allows Federal agency funds (other than those made available under title 23 or title 49) to pay the non-Federal share of the cost of any transportation project that is within, adjacent to, or provides access to Federal land, for projects funded under title 23 or under chapter 53 of title 49. • 23 U.S.C. 120(k) allows Federal land and tribal transportation funds to pay the non-Federal share of the cost of any project that is funded under title 23 or under chapter 53 of title 49 that provides access to or within Federal or tribal land. • Projects funded under the RTP set-aside retain the Federal share and flexible match and donation provisions available under 23 U.S.C. 206(f) and 23 U.S.C. 206(h), and these provisions remain in effect for prior year RTP funds. Recreational trail projects funded from other STBG funds under sections 133(b)(6) or 133(h) (not from the RTP set-aside) are subject to the general match requirement described above. See RTP Federal Share and Matching Requirements for more information. Other match provisions: • Except as noted above under 23 U.S.C. 120(j) and (k), 23 U.S.C. 206, or as allowed through other Federal program legislation, other Federal funds may not serve as the non-Federal match. Two Federal programs that allow Federal-to-Federal match are: o U.S. Department of Housing and Urban Development Community Development Block Grants may match or be matched by other Federal funds (42 U.S.C. 5305). o Federal programs for youth conservation or service corps, such as AmeriCorps under 42 U.S.C. 12571, may receive funds from other Federal programs as match. See AmeriCorps guidance for further information. • There is no provision for a programmatic match under the STBG or TA Set-Aside, except for the RTP set-aside funds. • There is no provision to allow TA Set-Aside funds to use up to 100 percent Federal share, except as noted above under section 120(c) and (f). Allocations and Suballocations: Fifty percent of the amount set aside for TA in the State (after deducting the set-aside for the RTP, if applicable) is suballocated to areas based on their relative share of the total State 2010 Census population. The remaining 50 percent is available for use in any area of the State. Other than the total percentage suballocated, the suballocation structure is the same as for STBG funds (see the STBG Guidance, Section E, Suballocation), except the requirement to provide obligation limitation to urbanized areas with populations over 200,000 does not apply to TA Set-Aside funds (23 U.S.C. 133(h)(2), MAP-21 § 1109(b)). Figure 1 shows the TA Set-Aside suballocation: Page 6 of 18 Figure 1: Transportation Alternatives Suballocation Source: FAST Act Suballocation of Apportioned Funds Questions and Answers See the FAST Act Funding Supplementary Tables for the specific dollar amounts. Transfer of Funds: 23 U.S.C. 126 (Transferability of Federal-aid Highway funds) provides for and has conditions on the transfer of funds apportioned under 23 U.S.C. 104(b). Transferred funds are to be obligated for the same purposes and to meet the same requirements of the category to which they are transferred. See FHWA Order 4551.1, Fund Transfers to Other Agencies and Among Title 23 Programs, dated August 12, 2013, and Transferability of Apportioned Program Funding under 23 U.S.C. 126. The following provisions apply to TA Set-Aside funds: • A State may transfer up to 50 percent of TA Set-Aside funds for the fiscal year to any 23 U.S.C. 104(b) apportionment for the State from the portion of TA Set-Aside funds available for use in any area of the State. No transfers are permitted from TA Set-Aside funds suballocated to sub-State areas based on population or funds set aside for the RTP (FAST Act § 1109; 23 U.S.C. 126). • Funds for TA Set-Aside-eligible projects may be transferred to the Federal Transit Administration (FTA) to administer in accordance with chapter 53 of title 49. Funds may be transferred in the same manner as other Federal-aid Highway Program procedures (23 U.S.C. 104(f)). • States may use STBG funds for projects eligible as TA Set-Aside projects without making a transfer and STBG provisions and requirements will apply. (23 U.S.C. 133(b)(15)). See the STBG Guidance, Section D, Eligibility. • There is no authorization to transfer funds to or from the RTP set-aside funds. However: State's Transportation Alternatives Set-Aside Set-Aside for Recreational Trails Program (unless Governor opts out) 50%

Suballocated to Sub-State Areas Based on Population 50% for Use in Any Area of State (State competitive process) Urbanized Areas with Populations over 200,000 (MPO competitive process) Urban Areas with Populations of 5,001 to 200,000 (State process) Areas with Population of 5,000 or fewer (State process) Page 7 of 18 o States may use STBG funds for any recreational trail (23 U.S.C. 133(b)(6) and 133(h)), without making a transfer, and STBG provisions and requirements will apply. See STBG Eligibility. o If a State opts out of the RTP, the funds remain under the TA Set-Aside, and the transferability provisions pertaining to the TA Set-Aside apply. [Back to Top]

COMPETITIVE SELECTION PROCESS (23 U.S.C. 133(h)(4)(A))

Consistent with other Federal-aid Highway Programs, TA Set-Aside funds are administered by the State Department of Transportation (DOT). All TA Set-Aside funds must be used for eligible projects that are submitted by eligible entities and chosen through a competitive project selection process. The statute requires the following with respect to the selection of projects: A State or metropolitan planning organization required to obligate funds in accordance with paragraph (2) [23 U.S.C. 133(h)(2)] shall develop a competitive process to allow eligible entities to submit projects for funding that achieve the objectives of this subsection. A metropolitan planning organization for an area described in subsection (d)(1)(A)(i) [i.e., an urbanized area of the State with a population of over 200,000] shall select projects under such process in consultation with the relevant State. (23 U.S.C. 133(h)(4)). State Competitive Process The State is responsible for selecting projects through a competitive process for all other funds (23 U.S.C. 133(h)(4)). However, also see Planning Requirements for requirements to coordinate with regional and metropolitan planning organizations (MPOs). • For funds suballocated to small urban areas (i.e., areas with populations of 5,001 to 200,000), the State is responsible for selecting projects through a competitive process (23 U.S.C. 133(h)(4)). The State may make these funds available for projects anywhere within the metropolitan planning area boundaries of an MPO serving an urbanized area with a population less than or equal to 200,000. For small urban areas not within MPOs, the State may make these funds available for projects anywhere within the municipal boundaries of the applicable small urban area, for example, within a town or township. Eligible entities within any small urban area also may apply to the State for "any area" funds. • For funds suballocated to nonurban areas (i.e., areas with populations below 5,000), the State is responsible for selecting projects through a competitive process (23 U.S.C. 133(h)(4)). • For funds available to any area of the State, the State is responsible for selecting projects through a competitive process (23 U.S.C. 133(h)(4)). These funds are available for any area of the State: large urbanized areas, small urban areas, or nonurban areas. • Section 133(d) does not authorize the State to further suballocate the small urban area funds, nonurban area funds, or any area funds to individual MPOs, counties, cities, or other local government entities prior to competitive selection. The statute requires the State to be responsible for the competitive process for these funds (23 U.S.C. 133(d)(2) and 133(h)(4)). However, the State's competitive process may include selection criteria to ensure a Page 8 of 18 distribution of projects among small MPOs, other small urban areas, and nonurban areas across the State. The State may consult with MPOs to ensure that MPO priorities are considered. MPOs Representing Urbanized Areas with Population of Over 200,000 For funds suballocated to urbanized areas with populations of over 200,000, the MPO(s) representing the urbanized area(s) is/are responsible for selecting projects through a competitive process, in consultation with the State (23 U.S.C. 133(h)(4)). The MPO may use these funds for projects anywhere within the boundaries of the applicable MPO area (23 U.S.C. 133(d)(2)). Eligible entities within urbanized areas also may apply to the State for "any area" funds. The MPO may use up to 50 percent of its suballocated funds for any project eligible under STBG, subject to the competitive project selection process. See http://www.fhwa.dot.gov/specialfunding/stp/160307.cfm. Section 23 U.S.C. 133(d)(4)(A) requires suballocation of funds to urbanized areas with populations of over 200,000. In the case of MPOs that represent two or more urbanized areas with populations over 200,000, or where urbanized areas with populations over 200,000 are represented by two or more MPOs: • If applicable, the State(s), MPO(s), and the local government entities representing the urbanized areas with populations over 200,000 should develop an agreement about how to suballocate funds among the urbanized areas with populations over 200,000. • A State may obligate the funds based on other factors if the State and MPO(s) jointly apply to the Secretary for the permission to base the obligation on other factors and the Secretary grants the request (23 U.S.C. 133(d)(4)(B)). Other Provisions and Priorities Recreational Trails Program: For the RTP set-aside, the

Governor designates the State agency or agencies to administer the program. This remains the same agency previously designated by the Governor (for most States, a State resource agency or grant agency, or may be the State DOT), unless the Governor designates a new agency (23 U.S.C. 206(c)). All RTP provisions and requirements continue under 23 U.S.C. 206. See the Recreational Trails Program section. SAFETEA-LU Funds: If States have prior year Transportation Enhancement or SRTS funds available, those funds may be administered under the same terms and conditions in effect prior to the effective date of MAP-21. See Safe Routes to School guidance and Treatment of Carryover Funds Under the FAST Act. Priorities: States and MPOs have discretion about how to establish project priorities, or whether to fund (or not fund) particular categories. There is no requirement to consider all eligible TA Set-Aside activities equally. However, the statute does not authorize a State or MPO to suballocate or set-aside funds for small businesses, youth corps, or categories of applicants prior to project selection. The State or MPO must select projects submitted by eligible entities and Page 9 of 18 chosen through a competitive process (23 U.S.C. 133(h)(4)). The competitive process may include criteria giving priority to projects that meet desired goals. Competitive Process Procedures: The statute did not establish specific standards or procedures for the required competitive process (23 U.S.C. 133(h)(4)). FHWA's TAP Guidance webpage has links to competitive process examples, which discuss illustrative selection criteria such as connectivity to essential services, safety, equity for disadvantaged populations, and the extent of community support for the project. FHWA also developed the Transportation Alternatives Program (TAP) Performance Management Guidebook to provide sample performance objectives and measures that States, MPOs, and project sponsors may consider as they administer, implement, and evaluate the TA projects and program outcomes. The FHWA Division office should ensure that the State and MPOs have competitive project selection processes, but there are no formal criteria, checklists, or certification requirements. The State and MPOs should ensure adequate public involvement and transparency as they develop their competitive processes. A competitive process should allow project sponsors to understand the project selection evaluation criteria. [Back to Top]

ELIGIBLE ENTITIES (23 U.S.C. 133(h)(4)(B))

Under 23 U.S.C. 133(h)(4)(B), the entities eligible to receive TA Set-Aside funds are: (1) a local government: Local government entities include any unit of local government below a State government agency, except for an MPO. Examples include city, town, township, village, borough, parish, or county agencies. (2) a regional transportation authority: Regional transportation authorities are considered the same as the Regional Transportation Planning Organizations defined in the statewide planning section (23 U.S.C. 135(m)). (3) a transit agency: Transit agencies include any agency responsible for public transportation that is eligible for funds as determined by the Federal Transit Administration. (4) a natural resource or public land agency: Natural resource or public land agencies include any Federal, Tribal, State, or local agency responsible for natural resources or public land administration. Examples include: • State or local park or forest agencies; • State or local fish and game or wildlife agencies; • Department of the Interior Land Management Agencies; and • U.S. Forest Service. (5) a school district, local education agency, or school: School districts, local education agencies, or schools may include any public or nonprofit private school. Projects should benefit the general public and not only a private entity. Page 10 of 18 (6) a tribal government. (7) a nonprofit entity responsible for the administration of local transportation safety programs: Examples include a nonprofit entity responsible for: • a local program implementing construction, planning, and design of infrastructure-related projects and systems that will provide safe routes for non-drivers, including children, older adults, and individuals with disabilities to access daily needs; and • a safe routes to school program. (8) any other local or regional governmental entity with responsibility for, or oversight of, transportation or recreational trails (other than an MPO or a State agency) that the State determines to be eligible, consistent with the goals of this subsection. State DOTs and MPOs are not eligible entities as defined under 23 U.S.C. 133(h)(4)(B) and therefore are not eligible project sponsors for TA Set-Aside funds. However, State DOTs and MPOs may partner with an eligible entity project sponsor to carry out a project. Nonprofit organizations are not eligible as direct grant subrecipients for TA Set-Aside funds unless they qualify through one of the eligible entity categories (e.g., where a nonprofit organization is a designated transit agency, school, or an entity responsible for the administration of local transportation safety programs). Nonprofit entities are eligible to partner

with any eligible entity on an eligible project, if State or local requirements permit. The RTP set-aside funds retain the RTP eligible project sponsor provisions under 23 U.S.C. 206 (23 U.S.C. 133(h)(5)(C)). [Back to Top]

ELIGIBLE PROJECTS (23 U.S.C. 133(h)(3))

TA Set-Aside funds may be obligated for projects or activities described in 23 U.S.C. 101(a)(29) or 213, as such provisions were in effect on the day before the date of enactment of the FAST Act. See TAP Eligible Projects Legislation as in effect prior to enactment of the FAST Act. Former 23 U.S.C. 213(b)(1): (1) Transportation Alternatives as defined in section 101 [former 23 U.S.C. 101(a)(29)]: The term "transportation alternatives" means any of the following activities when carried out as part of any program or project authorized or funded under this title, or as an independent program or project related to surface transportation: (A)Construction, planning, and design of on-road and off-road trail facilities for pedestrians, bicyclists, and other nonmotorized forms of transportation, including sidewalks, bicycle infrastructure, pedestrian and bicycle signals, traffic calming techniques, lighting and other safety-related infrastructure, and transportation projects to achieve compliance with the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.). Page 11 of 18 (B) Construction, planning, and design of infrastructure-related projects and systems that will provide safe routes for non-drivers, including children, older adults, and individuals with disabilities to access daily needs. (C) Conversion and use of abandoned railroad corridors for trails for pedestrians, bicyclists, or other nonmotorized transportation users. (D)Construction of turnouts, overlooks, and viewing areas. (E) Community improvement activities, which include but are not limited to: (i) inventory, control, or removal of outdoor advertising; (ii) historic preservation and rehabilitation of historic transportation facilities; (iii)vegetation management practices in transportation rights-of-way to improve roadway safety, prevent against invasive species, and provide erosion control; and (iv)archaeological activities relating to impacts from implementation of a transportation project eligible under title 23. (F) Any environmental mitigation activity, including pollution prevention and pollution abatement activities and mitigation to: (i) address stormwater management, control, and water pollution prevention or abatement related to highway construction or due to highway runoff, including activities described in sections 23 U.S.C. 133(b)(3) [as amended under the FAST Act], 328(a), and 329 of title 23; or (ii) reduce vehicle-caused wildlife mortality or to restore and maintain connectivity among terrestrial or aquatic habitats (Former 23 U.S.C. 213(b)(2)-(4)). (2) The recreational trails program under 23 U.S.C. 206 of title 23. See the Recreational Trails Program section. (3) The safe routes to school program eligible projects and activities listed at section 1404(f) of the SAFETEA-LU: • Infrastructure-related projects. • Noninfrastructure-related activities. • SRTS coordinator. SAFETEA-LU section 1404(f)(2)(A) lists "managers of safe routes to school programs" as eligible under the noninfrastructure projects. (4) Planning, designing, or constructing boulevards and other roadways largely in the rightof-way of former Interstate System routes or other divided highways. • See Boulevards from Divided Highways for examples. TA Set-Aside projects must benefit the general public (23 CFR 1.23 and 23 CFR 460.2). Not Eligible: TA Set-Aside funds cannot be used for the following activities because there is no authorization under the Federal-aid Highway Program: • State or MPO administrative purposes. Exceptions: o See FHWA's Memo Allocating Indirect Costs to Projects, dated September 4, 2015. o RTP administrative costs of the State for RTP set-aside funds. • Promotional activities, except as permitted under the SRTS (200 CFR 200.421(e)(3)). • Routine maintenance and operations, except trail maintenance as permitted under the RTP. • General recreation and park facilities, playground equipment, sports fields, campgrounds, picnic areas and pavilions, etc. Page 12 of 18 Location: There are no location restrictions for TA Set-Aside infrastructure projects; they are not required to be located along highways. Activities eligible under the TA Set-Aside also are eligible for STBG funds (23 U.S.C. 133(b)(15)). Under 23 U.S.C. 133(c)(3), projects eligible under the TA Set-Aside funded with STBG funds are exempt from the location restriction in 23 U.S.C. 133(c). Some aspects of activities eligible under the TA Set-Aside also may be eligible under other Federal-aid Highway Programs. See STBG Eligibility. For SRTS noninfrastructure projects, traffic education and enforcement activities must take place within approximately two miles of a primary or middle school (Kindergarten through 8th grade). Other eligible SRTS noninfrastructure activities do not have a location restriction. SRTS infrastructure projects do not have location restrictions because SRTS infrastructure projects are broadly eligible under other TA Set-Aside eligibilities. [Back to Top]

OTHER REQUIREMENTS

Annual Report (23 U.S.C. 133(h)(7)): The FAST Act established an annual reporting requirement for States or MPOs responsible for carrying out TA Set-Aside requirements. FHWA is developing the annual reporting procedures. The reporting requirements will begin with FY 2016 funds. Planning Requirements (23 U.S.C. 133(d)(5)): Projects must be identified in the Statewide Transportation Improvement Program (STIP)/Transportation Improvement Program (TIP) and be consistent with the Long-Range Statewide Transportation Plan and the Metropolitan Transportation Plan(s). When obligating suballocated funding, the State must coordinate with relevant MPOs or rural planning organizations. Programming and expenditure of funds for projects shall be consistent with 23 U.S.C. 134 and 135. Section 135(g)(6)(A) states: "In general.—Projects carried out in areas with populations of less than 50,000 individuals shall be selected, from the approved transportation improvement program (excluding projects carried out on the National Highway System and projects carried out under the bridge program or the Interstate maintenance program under this title [title 23] or under sections 5310 and 5311 of title 49), by the State in cooperation with the affected nonmetropolitan local officials with responsibility for transportation or, if applicable, through regional transportation planning organizations…". Projects for eligible planning must be reflected in the statewide planning and research work program or Metropolitan Unified Planning Work Program. Further, these projects must be in the STIP/TIP unless the State DOT or MPO agree that they may be excluded (23 CFR 420.119(e)). Applicability of 23 U.S.C. 217(i) for Bicycle Projects: 23 U.S.C. 217(i) requires that bicycle facilities "be principally for transportation, rather than recreation, purposes". However, sections 133(b)(6) and 133(h) list "recreational trails projects" as eligible activities under STBG. Therefore, the requirement in 23 U.S.C. 217(i) does not apply to recreational trails projects Page 13 of 18 (including for bicycle use) using STBG funds. Section 217(i) continues to apply to bicycle facilities other than trail-related projects, and section 217(i) continues to apply to bicycle facilities using other Federal-aid Highway Program funds (e.g., National Highway Performance Program, Highway Safety Improvement Program, Congestion Mitigation and Air Quality Improvement Program). The transportation requirement under section 217(i) is applicable only to bicycle projects; it does not apply to any other trail use or transportation mode. [Back to Top]

TREATMENT OF PROJECTS (23 U.S.C. 133(i))

Projects funded under 23 U.S.C. 133, including projects carried out under the TA Set-Aside under 23 U.S.C. 133(h), but excluding Recreational Trails Program (RTP) projects carried out under 23 U.S.C.133(h)(5), shall be treated as projects on a Federal-aid highway (23 U.S.C. 133(i)). This subjects all STBG projects (excluding those funded from the RTP set-aside) to, among other things, Davis-Bacon Act prevailing wage requirements and other Federal-aid requirements (e.g., Buy America, planning, environmental review, letting, etc.). Youth Service and Conservation Corps: Section 1524 of MAP-21 remains in effect. It provides exceptions to certain requirements regarding pay rates and contracting requirements for projects using qualified youth service or conservation corps. This provision requires the DOT/FHWA to "encourage the States and regional transportation planning agencies to enter into contracts and cooperative agreements with qualified youth service or conservation corps...to perform appropriate projects eligible under sections 162, 206, [former] 213, and 217 of title 23, United States Code, and under section 1404 of the SAFETEA-LU." These projects include scenic byways, recreational trails, transportation alternatives, bicycle and pedestrian, and safe routes to school. Section 1524 of MAP-21 applies to any projects eligible under these sections, including projects funded under other Federal-aid Highway Program funds. See the MAP-21 Section 1524 Questions and Answers and Youth Workforce Development Resources. To the extent the requirements of 23 U.S.C. 133 relating to Treatment of Projects conflicts with the express provisions in section 1524, the provisions in section 1524 prevail because they are more specific than the general provision of 23 U.S.C. 133(i). [Back to Top]

RECREATIONAL TRAILS PROGRAM

Section 1109 of the FAST Act amended the RTP to make the funding a set-aside from the TA Set-Aside. Unless the Governor opts out 30 days in advance of an apportionment for any fiscal year, an amount equal to the State's FY 2009 RTP apportionment is set aside from the State's TA Set-Aside funds for recreational trails projects. (23 U.S.C. 133(h)(5)). All RTP provisions and requirements continue under 23 U.S.C. 206. See RTP Guidance and Information. For the RTP set-aside, the Governor designates the State agency or agencies to administer the program. This remains the same agency previously designated by the Governor (for most States, a State resource agency or grant agency, or the State DOT), unless the Governor designates a

new agency (23 U.S.C. 206(c)). If an agency other than the State DOT administers the RTP, then Page 14 of 18 the States should have (or should develop) a Stewardship and Oversight Plan to outline the roles and responsibilities of FHWA and the State agency or agencies that administer the RTP. See an example on the RTP website: (HTML / PDF). Under 23 U.S.C. 133(h)(5), if continuing the RTP: • Each State shall obligate an amount of funds reserved under 23 U.S.C. 133(h) (the TA SetAside) equal to the amount of the funds apportioned to the State for FY 2009 under 23 U.S.C. 104(h)(2), as in effect on the day before enactment of MAP-21, for projects relating to recreational trails under 23 U.S.C. 206. See FAST Act Funding Tables. • Each State shall return 1 percent of those funds to the Secretary for the administration of RTP. See FAST Act Funding Tables. • Each State shall comply with the provisions of the administration of the RTP under 23 U.S.C. 206, including the use of apportioned funds. Therefore, all RTP provisions and requirements remain unchanged, including the requirement for 40 percent diverse use, 30 percent motorized use, and 30 percent nonmotorized use (23 U.S.C. 206(d)(3)(A)). • For a State to be eligible to use funds set aside for the RTP, the State must comply with the requirement that "...the State shall establish a State recreational trail advisory committee that represents both motorized and nonmotorized recreational trail users, which shall meet not less often than once per fiscal year." If a State does not meet this requirement, it is not eligible to use RTP set-aside funds (23 U.S.C. 206(c)(2)). If opting out of the RTP: • The Governor of the State must notify the Secretary not later than 30 days prior to apportionments being made for any fiscal year (23 U.S.C. 133(h)(6)(A)). Any State that desires to opt out of the RTP set-aside shall notify FHWA via email, with a letter signed by the Governor or the Governor's designee accompanying the opt-out notification, to the FHWA Office of Budget's official mailbox (BudDiv@dot.gov) no later than the September 1st prior to the fiscal year in which the State wishes to opt out. FAST Act Funding Tables. • The funds remain as TA Set-Aside funds. • The State cannot use a portion of its TA Set-Aside funds for RTP administrative costs for the fiscal year in which it opts out. The ability to use RTP funds for State administrative costs is limited to a percentage "of the apportionment made to the State for the fiscal year" (which would include the RTP set-aside funds). If there is no apportionment, then there is no program to administer, and the administrative funds cannot be permitted. Recreational trail projects that would be eligible under the RTP also are eligible under STBG under 23 U.S.C. 133(b)(6) and under the TA Set-Aside under 23 U.S.C. 133(h). • STBG provisions and requirements apply to STBG funds used for recreational trail projects. • TA Set-Aside provisions and requirements apply to TA Set-Aside funds used for recreational trail projects (excluding the RTP set-aside funds). RTP Administrative Funds are limited to "costs to the State incurred in administering the program, but in an amount not to exceed 7 percent of the apportionment made to the State for the fiscal year" (emphasis added). The limitation is subject to the amount necessary within a fiscal year, and does not carry over. A State cannot carry over administrative funds from Year 1 because that would increase the administrative funds available in Year 2. RTP funds obligated for administrative costs but not expended within a fiscal year must be deobligated and used for Page 15 of 18 other eligible trail projects. The restriction applies to all RTP funds, including funds apportioned prior to the enactment of MAP-21 or the FAST Act (23 U.S.C. 206(d)(2)(H)). To cover administrative costs at the beginning of a fiscal year, States may request authorization to obligate administrative costs as an Advance Construction project, which is allowable under 23 U.S.C. 115 and 23 CFR 630 Subpart G. For eligible administrative costs, see RTP Trail Assessments, Education and Training, and State Administrative Costs. RTP Educational Funds are limited to the "development and dissemination of publications and operation of educational programs to promote safety and environmental protection, (as those objectives relate to one or more of the use of recreational trails, supporting non-law enforcement trail safety and trail use monitoring patrol programs, and providing trail-related training), but in an amount not to exceed 5 percent of the apportionment made to the State for the fiscal year" (23 U.S.C. 206(d)(2)(G)). The limitation is subject to the amount necessary within a fiscal year, and does not carry over. RTP funds obligated for educational costs but not expended within a fiscal year must be deobligated and used for on-the-ground trail projects. This restriction applies to all RTP funds, including funds apportioned prior to the enactment of MAP-21 or the FAST Act. States may use STBG funds under 23 U.S.C. 133(b)(6) or TA Set-Aside funds under 23 U.S.C. 133(h) for recreational trail educational programs. The educational activities eligible under the RTP do not depend on the existence of a program. Therefore, even if a State opts out of the RTP, it may fund recreational trail educational programs under STBG. Because there is no specific apportionment for a State that opts out of the RTP, there is no limitation on the funds available for recreational trail educational

programs using STBG funds under 133(b)(6) or 133(h). For eligible educational costs, see RTP Trail Assessments, Education and Training, and State Administrative Costs. RTP Suballocation Requirement: MAP-21 created (and the FAST Act continued) a potential conflict for the requirements for 40 percent diverse use, 30 percent motorized use, and 30 percent nonmotorized use, because the 40-30-30 percentage requirements apply to the full apportionment before the return of 1 percent to the U.S. DOT for administrative purposes. The RTP guidance for State Suballocations explains how States can meet the 40-30-30 requirements by selecting projects that qualify simultaneously under the motorized and diverse categories or the nonmotorized and diverse categories. [Back to Top] Page 16 of 18

TA SET-ASIDE PROJECT ELIGIBILITY QUESTIONS AND ANSWERS

The following questions and answers relating to project eligibility come from previous MAP-21 guidance and questions and answers, updated to be consistent under the FAST Act. See TAP Eligible Projects Legislation as in effect prior to the enactment of the FAST Act for the text from the former 23 U.S.C. 213(b) and 101(a)(29). Eligible TA Set-Aside projects must be sponsored by an eligible entity and selected through the competitive selection process. Archaeological Activities: What archaeological activities are eligible? Archaeological activities must relate to impacts from implementation of a transportation project eligible under title 23 (Former 23 U.S.C. 101(a)(29)(E)(iv)). Bike Sharing: Are bike sharing systems eligible? Yes. Bike sharing systems are eligible for Federal-aid Highway Program funds, under several Federal-aid programs, including the STBG and TA Set-Aside. In addition to bike sharing docks, equipment, and other capital costs, FHWA funds may be used to purchase bicycles that are integral to a bike sharing system. Federal-aid Highway Program funds cannot be used for operational costs (Former 23 U.S.C. 101(a)(29)(A) and (B)). Historic Preservation: What historic preservation projects are eligible? Historic preservation activities are limited to historic preservation and rehabilitation activities relating to historic transportation facilities. Operation of historic transportation facilities is not eligible (Former 23 U.S.C. 101(a)(29)(E)(ii)). Land Acquisition: Is land acquisition eligible? Land acquisition is allowed for eligible TA projects, such as right-of-way or easements for pedestrian and bicycle projects; turnouts, overlooks, and viewing areas; historic transportation facilities; or environmental mitigation. FHWA's Real Estate Guidance for Enhancement Projects remains a useful resource to address real estate and property management issues. However, MAP-21 eliminated eligibility for acquisition of scenic easements and scenic or historic sites (including historic battlefields), scenic or historic highway programs (including tourist and welcome center facilities), or museums. Landscaping: Is landscaping and scenic enhancement eligible as an independent project? Under the "community improvement activities" category, projects such as streetscaping and corridor landscaping may be eligible under the TA Set-Aside if sponsored by an eligible entity and selected through the required competitive process. Landscaping and scenic enhancement features, including junkyard screening and removal under 23 U.S.C. 136, may be eligible as part of the construction of any Federal-aid highway project, including eligible TA-funded projects (23 U.S.C. 319). Lighting: Is lighting eligible? Yes. Lighting is eligible for bicycle and pedestrian facilities and may be appropriate as part of other eligible categories. Project sponsors should consider energy-efficient methods and options that reduce light pollution (Former 23 U.S.C. 101(a)(29)(A)). Page 17 of 18 Planning: Is planning eligible as an independent TA Set-Aside project? Yes. Planning for pedestrian and bicycle activities is eligible as an independent project. Former 23 U.S.C. 101(a)(29) did not specify if "construction, planning, and design" limits planning to a component of a project, or whether planning may be an independent project related to eligible projects. Title 23 has sections that use "and" to describe both related and unrelated types of activities, therefore FHWA believes that section 101(a)(29) supported both planning components and independent planning projects. Resilience: Are resilience improvements eligible? Making transportation systems more resilient to changing environmental conditions is an important aspect of maintaining a state of good repair. Federal-aid highway planning and projects, including activities funded via the TA Set-Aside, may include climate and extreme weather resiliency elements to make transportation systems more reliable. For further information, please see FHWA guidance Eligibility of Activities to Adapt to Climate Change. Road Diets: Are road diets eligible? Road Diets are among FHWA's Proven Safety Countermeasures. If work to benefit activities eligible under the TA Set-Aside that are associated with a road diet (such as widening sidewalks or installing separated bike lanes) would require incidental highway reconstruction, then TA SetAside funds may cover those costs (Former 23 U.S.C. 101(a)(29)(A) and (B)). Safety Education Activities: Are safety education activities eligible? Safety education activities are eligible for TA Set-Aside funds if they are

eligible as SRTS projects, targeting children in Kindergarten through 8th grade (Former 23 U.S.C. 213(b)(3)). STBG funds may be used for carrying out nonconstruction projects related to safe bicycle use under 23 U.S.C. 133(b)(6) and 217(a). Turnouts: What is eligible under "construction of turnouts, overlooks, and viewing areas"? The activity "construction of turnouts, overlooks, and viewing areas" may use the criteria for "scenic overlooks" described in 23 CFR 752.6: "Scenic overlooks may provide facilities equivalent to those provided in safety rest area[s]" described in 23 CFR 752.5 (Former 23 U.S.C. 101(a)(29)(D)). Utilities: Is utility relocation eligible? Utility relocation that is necessary to accommodate an eligible project may be eligible for Federal reimbursement only if permitted under State law or policy. Federal law and regulation (23 U.S.C. 123, Relocation of utility facilities, and 23 CFR 645, Utilities) recognize that some States, by State law or policy, prohibit using public funds to relocate utilities; in these States, it is illegal to use funds to relocate utilities. (23 U.S.C. 123, Relocation of utility facilities, and 23 CFR 645, Utilities) [Back to Top] Page 18 of 18 TRANSPORTATION ALTERNATIVES PROGRAM: ELIGIBLE PROJECTS LEGISLATION AS IN EFFECT PRIOR TO ENACTMENT OF THE FAST ACT 23 U.S.C. 213(b) (b) ELIGIBLE PROJECTS.—A State may obligate the funds reserved under this section for any of the following projects or activities: (1) Transportation alternatives, as defined in section 101. (2) The recreational trails program under section 206. (3) The safe routes to school program under section 1404 of the SAFETEA-LU (23 U.S.C. 402 note; Public Law 109-59). (4) Planning, designing, or constructing boulevards and other roadways largely in the right-ofway of former Interstate System routes or other divided highways. 23 U.S.C. 101(a)(29) (29) TRANSPORTATION ALTERNATIVES.—The term "transportation alternatives" means any of the following activities when carried out as part of any program or project authorized or funded under this title, or as an independent program or project related to surface transportation: (A) Construction, planning, and design of on-road and off- road trail facilities for pedestrians, bicyclists, and other nonmotorized forms of transportation, including sidewalks, bicycle infrastructure, pedestrian and bicycle signals, traffic calming techniques, lighting and other safety-related infrastructure, and transportation projects to achieve compliance with the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.). (B) Construction, planning, and design of infrastructure-related projects and systems that will provide safe routes for non-drivers, including children, older adults, and individuals with disabilities to access daily needs. (C) Conversion and use of abandoned railroad corridors for trails for pedestrians, bicyclists, or other nonmotorized transportation users. (D) Construction of turnouts, overlooks, and viewing areas. (E) Community improvement activities, including— (i) inventory, control, or removal of outdoor advertising; (ii) historic preservation and rehabilitation of historic transportation facilities; (iii) vegetation management practices in transportation rights-of-way to improve roadway safety, prevent against invasive species, and provide erosion control; and (iv) archaeological activities relating to impacts from implementation of a transportation project eligible under this title. (F) Any environmental mitigation activity, including pollution prevention and pollution abatement activities and mitigation to— (i) address stormwater management, control, and water pollution prevention or abatement related to highway construction or due to highway runoff, including activities described in sections 133(b)(11), 328(a), and 329; or (ii) reduce vehicle-caused wildlife mortality or to restore and maintain connectivity among terrestrial or aquatic habitats. Note: For 23 U.S.C. 101(a)(29)(E), FHWA defines "including" as "which include, but not limited to"

CONGESTION MITIGATION AND AIR QUALITY (CMAQ)

This category of funds may be used for transportation projects and programs that help meet the requirements of the Clean Air Act. Funding is available to reduce congestion and improve air quality for areas that do not meet the National Ambient Air Quality Standards (NAAQS) for ozone, carbon monoxide, or particulate matter – nonattainment areas- and for areas that were out of compliance but have now met the standards – maintenance areas.

Eligible projects include:

1) Acquisition of diesel retrofits, including tailpipe emissions control devices, and the provision of diesel-related outreach activities.

2) Intermodal equipment and facility projects that target diesel freight emissions through direct exhaust control from vehicles or indirect emissions reductions through improvements in freight network logistics.

3) Alternative fuel projects including participation in vehicle acquisitions, engine conversions, and refueling facilities.

4) Establishment or operation of a traffic monitoring, management, and control facility, including the installation if advanced truck stop electrification systems.

5) Projects that improve traffic flow, including efforts to provide signal systemization, construct HOV lanes, streamline intersections, add turning lanes, improve transportation systems management and operations that mitigate congestion and improve air quality, and implement ITS and other CMAQ-eligible projects, including efforts to improve incident and emergency response or improve mobility, such as through real time traffic, transit and multi-modal traveler information.

6) Projects or programs that shift travel demand to nonpeak hours or other transportation modes, increase vehicle occupancy rates, or otherwise reduce demand through initiatives, such as tele-working, ridesharing, pricing, and others.

7) Transit investment, including transit vehicle acquisitions and construction of new facilities or improvements to facilities that increase transit capacity.

8) Non-recreational bicycle transportation and pedestrian improvements that provide a reduction in single-occupant vehicle travel.

9) Education and outreach.

10) Vehicle inspection and maintenance programs.

The project should use MPMS code “CAQ”. The project should be programmed 80% federal, 20% state (or local) unless it is eligible for 100%. (See Attachment A for safety items eligible for 100% participation). ** Only those counties that are in non-attainment or maintenance of the Federal 8 Hour Ozone Standard are eligible for CMAQ funds.

BRIDGE project – determine if bridge is eligible Federal Critical Bridge funds. If so, the bridge will be no longer than or equal to 21 feet. If this criterion is met and the bridge has a sufficiency rating below 50.0, the bridge will have an HBRR code of ‘P’ and thus is eligible for replacement or rehabilitation. If the bridge is longer than or equal to 21 feet and has a sufficiency rating between 50.0 and 80.0 the bridge will have an HBR code of ‘H’ and is eligible for rehabilitation. If there is no HBRR code and the bridge is longer than 21 feet, the bridge is eligible for ‘bridge preservation’ work. If the bridge is not eligible for the type of work that is intended (ie., replacing a bridge with a sufficiency rating of 60), you will have the opportunity of programming with STP (if the bridge is longer than 21 feet) or state bridge funds. Remember also, to use these funds, the replaced or rehabilitated bridge must conform to current federal standards. Thus you cannot use these funds to build a covered bridge or anything else that is functionally obsolete.

If the project is eligible for Federal Critical Bridge funds, you should use MPMS code “BOF” if the bridge is not on the federal aid system.
“Off System (**BOF**)” bridges are those defined with a functional class of 08, 09, or 19 ONLY. The project should be programmed 80% federal, 20% state for state owned bridges and 80% federal, 15% state, 5% local for locally owned bridges and 90% federal, 10% state for bridges on the Interstate System.

HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP)

This is a core Federal-Aid program with the purpose of achieving a significant reduction in fatalities and serious injuries on all public roads, including local public roads.

The HSIP is highly data driven and, as such, highway safety improvements projects must be identified on the basis of crash experience, crash potential, crash rate, or other data-supported means. These projects MUST be listed on the Strategic Highway Safety Program (SHSP).

Eligibility of specific projects, strategies, and activities generally are based on:

- Consistency with a state's SHSP,
- Crash experience, crash potential, crash rate, or other data-supported means,
- Compliance with Title 23, CFR, Highways, requirements,
- State's strategic or performance based safety goals to reduce fatalities and serious injuries on all public roads.

This category of funds may only be used for safety improvement projects such as the elimination of curves, intersection improvements, elimination of sight distance deficiencies, etc. on any public road.

You should use MPMS Code "HSIP". These projects should be programmed 90% federal, 10% state unless it is eligible for 100%. (See Attachment A for safety items eligible for 100% participation).

RAIL/HIGHWAY CROSSING PROGRAM (RRX): These funds may only be used to improve rail/highway crossings through the installation or replacement of protective devices (gates/light) or improvement of the crossing surface on any public roadway – should use MPMS code RRX. Please note that the work to the crossing surface cannot be more than 20% of the total project cost. These projects are 90% federal, 10% state though are eligible for use of toll credits.

NATIONAL HIGHWAY PERFORMANCE PROGRAM (NHPP): The purposes of this program are 1) to provide support for the condition and performance of the National Highway System (NHS); 2) to provide support for the construction of new facilities on the NHS; and 3) to ensure that investments of the Federal-Aid funds in highway construction are directed to support progress toward the achievement of performance targets established in a State's asset management plan for the NHS.

NHPP funds may be obligated only for a project on an "eligible facility." Under the NHPP, and "eligible facility" includes only those facilities located on the National Highway System (NHS), as defined in 23 U.S.C. 103, Highway: Federal-Aid System, except as specified in the statute. Because very few local facilities are on the NHS, it is not often that NHPP funding would apply to a local project.

Eligible projects include:

1) Construction, reconstruction, resurfacing, restoration, rehabilitation, preservation or operational improvement of segments of the NHS.

2) Construction, replacement (including replacement with fill material), rehabilitation, preservation, and protection (including scour countermeasures, seismic retrofits, impact protection measures, security countermeasures, and protection against extreme events) of bridges on the NHS.

3) Construction, replacement (including replacement with fill material), rehabilitation, preservation, and protection (including impact protection measures, security countermeasures, and protection against extreme events) of tunnels on the NHS.

4) Inspection and evaluation of bridges and tunnels on the NHS, and inspection and evaluation of other highway infrastructure assets on the NHS. This includes but is not limited to, signs, retaining walls, and drainage structures.

5) Training of bridge and tunnels inspectors.

6) Construction, rehabilitation, or replacement of existing ferry boats and ferry boat facilities, including approaches that connect road segments of the NHS.

7) Construction, reconstruction, resurfacing, restoration, rehabilitation, and preservation of, and operational improvements for, a Federal-aid highway not on the NHS, and construction of a transit project eligible for assistance under chapter 53 of title 49, if –

a. The highway project or transit project is in the same corridor as, and in proximity to, a fully access controlled highway on the NHS;
b. The construction or improvements will reduce delays or produce travel time savings on the fully access-controlled highway described in clause (a) and improve regional traffic flow; and
c. The construction or improvements are more cost-effective, as determined by benefit-cost analysis, than an improvement to the fully access-controlled highway on the NHS.

8) Bicycle transportation and pedestrian walkways in accordance with section 217. The project or activity must be associated with an NHS facility.

9) Highway safety improvements for segments of the NHS.

10) Capital and operating costs for traffic and traveler information monitoring, management, and control facilities and programs. The project activity must be associated with an NHS facility.
11) Development and implementation of a State asset management plan for the NHS in accordance with this section, including data collection, maintenance, and integration and cost associated with obtaining, updating, and licensing software and equipment required for risk-based asset management and performance-based management.

12) Infrastructure- based intelligent transportation systems capital improvements. The project or activity must be associated with an NHS facility.

13) Environmental restoration and pollution abatement in accordance with section 328. The project or activity must be associated with an NHS facility.

14) Control of noxious weeds and aquatic noxious weeds and establishment of native species in accordance with section 329. The project or activity must be associated with an NHS facility.

15) Environmental mitigation efforts related to projects funded under this section as described in subsection Environmental Mitigation. The project or activity must be associated with an NHS facility.

16) Construction of publicly owned intra-city or intercity bus terminals servicing the NHS.
The following activities are made eligible by other provisions:

- Workforce development, training, education activities that are in accordance with 23 U.S.C. 504(e).
- Fringe and corridor parking as provided for in 23 U.S.C. 137.

The project or activity must be associated with an NHS facility.

The project should be programmed 80% federal, 20 percent state for projects on the NHS or 90% federal, 10% state for project on the Interstate system, or 100% federal if it's eligible (See Attachment A for safety items eligible for 100% participation). The federal share for workforce development, training, and education activities is 100%, except projects funded by the Local Technical Assistance program (LTAP). Projects that demonstrate an improvement to the efficient movement of freight and are indentified in a State freight plan are eligible for a federal share of 95% for projects on the Interstate System and up to 90% for all other project.

NATIONAL HIGHWAY FREIGHT PROGRAM (NHFP)

1. Authorization Levels Under the FAST Act: Section 1101 of the FAST Act authorizes appropriations for the Federal-aid Highway Program, including the NHFP. FAST Act, section 1104(b)(6), amends 23 U.S.C. 104(b) and provides for the apportionment of funds for the NHFP in the following amounts for FY 2016, FY 2017, FY 2018, FY 2019, and FY 2020: $1.15B, $1.1B, $1.2B, $1.35B, and $1.5B, respectively.

The estimated amounts below represent the net amount available after a portion of the authorized amount is set aside for the Metropolitan Planning Program per the freight formula under section 1104(b)(6) of the FAST Act.

The estimated amounts of NHFP are as follows:

FY 2016 $1,140,250,003
FY 2017 $1,090,673,914
FY 2018 $1,189,826,092
FY 2019 $1,338,554,353
FY 2020 $1,487,282,615
TOTAL $6,246,586,977

The Program Codes for these NHFP funds are as follows:

Program Code
Program Description
Statutory Reference

Z460 National Highway Freight Program (NHFP) Section 1101(a)(1)
Z470 NHFP - Freight Intermodal or Freight Rail Project 23 U.S.C.167(i)(5)(B)
All references relate to the FAST Act (Public Law 114-94) unless otherwise noted.

2. Period of Availability: NHFP funds are available for obligation for up to 4 years (three years after the last day of the fiscal year for which the funds are authorized). 23 U.S.C. 118.

3. Obligation Limitation: NHFP obligations are reimbursed from the Highway Account of the Highway Trust Fund. NHFP funds come with contract authority and are subject to the annual obligation limitation imposed on the Federal-aid Highway Program.

4. Federal Share: The Federal share for NHFP funds is governed by 23 U.S.C. 120. The Federal share is generally 80 percent, subject to the upward sliding scale adjustment for States containing public lands. The Federal share for projects on the Interstate system (except projects that add lanes that are not high-occupancy-vehicle or auxiliary lanes) is 90 percent, subject to the upward sliding scale adjustment. For projects that add single occupancy vehicle capacity, that portion of the project that increases single occupancy vehicle capacity will revert to the 80 percent Federal share participation level. 23 U.S.C. 120.

Certain types of improvements (predominantly safety improvements) as listed in 23 U.S.C. 120(c)(1) may have a Federal share of 100 percent. This provision is limited to 10 percent of the total funds apportioned to a State under 23 U.S.C. 104.

Projects incorporating Innovative Project Delivery methods as described in 23 U.S.C. 120(c)(3) may have an increased Federal share. This provision will be the subject of further guidance.

The Federal share for projects that are located on toll roads, and subject to the provisions of 23 U.S.C. 129, is limited to 80 percent.

States may choose to use a lower Federal share on Federal-aid projects as provided in 23 U.S.C. 120.

5. Transferability of NHFP Funds: A State may transfer up to 50 percent of the NHFP amount apportioned for the fiscal year to any other 23 U.S.C. 104(b) apportionment for the State. 23 U.S.C. 126.

D. NATIONAL HIGHWAY FREIGHT NETWORK

1. National Highway Freight Network (NHFN): The FAST Act requires the FHWA Administrator to establish a NHFN to strategically direct Federal resources and policies toward improved performance of the Network. Section 1103 of the FAST Act amends 23 U.S.C. 101(a)(15)

to include a definition of the NHFN established under 23 U.S.C. 167. The NHFN includes the following subsystem of roadways:

a. Primary Highway Freight System (PHFS) - This is a network of highways identified as the most critical highway portions of the U.S. freight transportation system determined by measureable and objective national data. The initial designation of the PHFS is the 41,518 centerline mile network identified as a comprehensive network during the development of the highway-only Primary Freight Network (PFN) under 23 U.S.C. 167(d). The comprehensive network includes 37,436 centerline miles of Interstate and 4,082 centerline miles of non-Interstate roads. Note: This network differs from the PFN that was designated to satisfy the MAP-21 requirement in October 2015. For further information on those distinctions, see the Federal Register Notice of October 23, 2015. [need link]

The FHWA Administrator is required to re-designate the PHFS every 5 years. Each re-designation is limited to a maximum 3 percent increase in the total mileage of the system. 23 U.S.C. 167(d). Further guidance on input and factors for re-designation of the PHFS will be issued in the future.

b. Interstate Routes not on the PHFS - These highways consist of the remaining portion of Interstate roads not designated as part of the PHFS. These routes provide important continuity and access to freight transportation facilities. Nationwide, these portions of Interstate amount to approximately 9,511 centerline miles of Interstate (actual mileage subject to additions and deletions from the Interstate Highway System).

c. Critical Rural Freight Corridors (CRFC) - These are public roads not in an urbanized area which provide access and connection to the PHFS and the Interstate with other important ports, public transportation facilities, or other intermodal freight facilities. States are responsible for designating public roads in their state as CRFCs. In accordance with 23 U.S.C. 167(e), a State may designate a public road within the borders of the State as a CRFC if the public road is not in an urbanized area, and meets one or more of the following seven elements:

1. is a rural principal arterial roadway and has a minimum of 25 percent of the annual average daily traffic of the road measured in passenger vehicle equivalent units from trucks (FHWA vehicle class 8 to 13);

2. provides access to energy exploration, development, installation, or production areas;

3. connects the PHFS or the Interstate System to facilities that handle more than- i.50,000 20-foot equivalent units per year; or
ii.500,000 tons per year of bulk commodities;

4. provides access to-
   i.a grain elevator;
   ii.an agricultural facility;
   iii.a mining facility;
   iv.a forestry facility; or
   v.an intermodal facility;

5. connects to an international port of entry;
6. provides access to significant air, rail, water, or other freight facilities in the State; or
7. is determined by the State to be vital to improving the efficient movement of freight of importance to the economy of the State.

The designation of the CRFC is limited to a maximum of 150 miles of highway or 20 percent of the PHFS mileage in the State, whichever is greater.

d. Critical Urban Freight Corridors (CUFC) - These are public roads in urbanized areas which provide access and connection to the PHFS and the Interstate with other ports, public transportation facilities, or other intermodal transportation facilities. In an urbanized area with a population of 500,000 or more, the metropolitan planning organization (MPO), in consultation with the State, is responsible for designating the CUFCs. In an urbanized area with a population of less than 500,000, the State, in consultation with the MPO, is responsible for designating the CUFCs. Regardless of population, a public road may be designated as a CUFC if it is in an urbanized area, and meets one or more of the following four elements:
1. connects an intermodal facility to; i.the PHFS
ii. the Interstate System; or
iii. an intermodal freight facility;

2. is located within a corridor of a route on the PHFS and provides an alternative highway option important to goods movement;
3. serves a major freight generator, logistic center, or manufacturing and warehouse industrial land; or
4. is important to the movement of freight within the region, as determined by the MPO or the State.

The designation in limited to a maximum of 75 miles of highway or 10 percent of the PHFS mileage in the State, whichever is greater. 23 U.S.C. 167(f).
States with PHFS mileage greater than or equal to 2 percent, calculated based on the proportion of total designated PHFS mileage in the State to the total mileage of the PHFS in all States, are considered high mileage States with respect to the PHFS and may obligate funds for projects on the PHFS, the CRFC, and the CUFC. States with PHFS mileage of less than 2 percent are considered low mileage States with respect to the PHFS and may obligate funds for projects on all portions of the NHFN (the PHFS, the CRFC, the CUFC, and the rest of the Interstate System in their State). 23 U.S.C. 167(i)(3).

As of October 1, 2015, the NHFN consists of the PHFS and other Interstate portions not on the PHFS, for a total of approximately 51,029 centerline miles. The NHFN is expected to increase with the designation of CRFCs and CUFCs and will fluctuate with additions and deletions to the Interstate Highway System. States and MPOs are allowed to designate these Corridors on a rolling basis, and must certify to the FHWA Administrator that the designated corridors meet the requirements of the applicable provision (CRFCs and CUFCs). 23 U.S.C. 167(g). Further guidance will be developed on the process for identification, designation, and certification of the CRFCs and CUFCs.

The NHFN will be the highway component of the National Multimodal Freight Network (NMFN). An interim NMFN must be established within 180 days after enactment of the FAST Act. 49 U.S.C. 70103(b).

2. Highway Freight Transportation Conditions and Performance Reports: Not later than 2 years after the date of enactment of the FAST Act, and biennially thereafter, the FHWA Administrator shall prepare and submit to Congress a report that describes the conditions and performance of the NHFN in the United States. 23 U.S.C. 167(h). Note that MAP-21 included a similar provision for reporting on the conditions and performance on the National Freight Network.

E. ELIGIBILITY
1. General: NHFP funds may be obligated for projects that contribute to the efficient movement of freight on the National Highway Freight Network (NHFN), and are consistent with the planning requirements of sections 134 and 135 of title 23, United States Code. Beginning 2 years after the date of enactment of the FAST Act, a State may not obligate NHFP funds apportioned to the State unless the State has developed a State Freight Plan (SFP) in accordance with 49 U.S.C. 70202, except that the multimodal components of the SFP may be incomplete. Projects must be identified in the Statewide Transportation Improvement Program (STIP)/Transportation Improvement Program (TIP) and consistent with the Long-Range Statewide Transportation Plan and the Metropolitan Transportation Plan(s). 23 U.S.C. 167(i)(7).

2. State Freight Plan and State Freight Advisory Committee: Freight planning is an important component of Statewide and metropolitan transportation planning processes. MAP-21 encouraged States to develop a freight plan under 23 U.S.C. 167. State freight planning is covered under the FAST Act in a different provision of law: Section 8001 of the FAST Act adds section 70202 of title 49, United States Code, requiring each State that receives NHFP funding to develop a comprehensive freight plan that provides for the immediate and long-range planning activities and investments of the State with respect to freight. The SFP may be developed separately from or incorporated into the Statewide strategic long-range transportation plan required by 23 U.S.C. 135. Among the factors that must be included in the SFP is a description of how the funds under 23 U.S.C. 167 would be invested and matched. In addition, an investment plan component must include a list of priority projects with the stipulation that the investment plan must show how funding for completion of the project or an identified phase of a project in the investment plan can reasonably be anticipated to be available for the project within the time period identified in the freight investment plan. Interim SFP guidance was developed under section 1118 of MAP-21. This guidance will be updated to reflect FAST Act changes.

Section 8001 of the FAST Act also encourages each State to establish a freight advisory committee consisting of a representative cross-

section of public and private sector freight stakeholders, including representatives of ports, freight railroads, shippers, carriers, freight-related associations, third-party logistics providers, the freight industry workforce, the transportation department of the State, and local governments. Under Section 8001, a State freight advisory committee, if applicable, must participate in the development of the SFP. Under Section 1116, the Administrator must provide an opportunity for State freight advisory committees, as applicable, to submit additional miles for consideration during the redesignation of the PHFS. State advisory committee guidance was developed under MAP-21 section 1117 and released as part of the Interim State Freight Plan guidance. This guidance will be updated to reflect FAST Act changes.

3. Eligible Projects: Eligible projects shall contribute to the efficient movement of freight on the NHFN, and be identified in a freight investment plan included in a SFP (required in FY 2018 and beyond). NHFP funds may be obligated for one or more of the following:

1. Development phase activities including planning, feasibility analysis, revenue forecasting, environmental review, preliminary engineering and design work, and other preconstruction activities.
2. Construction, reconstruction, rehabilitation, acquisition of real property (including land relating to the project and improvements to land), construction contingencies, acquisition of equipment, and operational improvements directly relating to improving system performance.
3. Intelligent transportation systems and other technology to improve the flow of freight, including intelligent freight transportation systems.
4. Efforts to reduce the environmental impacts of freight movement.
5. Environmental and community mitigation for freight movement.
6. Railway-highway grade separation.
7. Geometric improvements to interchanges and ramps.
8. Truck-only lanes.
9. Climbing and runaway truck lanes.
10. Adding or widening of shoulders.
11. Truck parking facilities eligible for funding under section 1401 of MAP-21
12. Real-time traffic, truck parking, roadway condition, and multimodal transportation information systems.
13. Electronic screening and credentialing systems for vehicles, including weigh-in-motion truck inspection technologies.
14. Traffic signal optimization, including synchronized and adaptive signals.
15. Work zone management and information systems.
16. Highway ramp metering.
17. Electronic cargo and border security technologies that improve truck freight movement.
18. Intelligent transportation systems that would increase truck freight efficiencies inside the boundaries of intermodal facilities.
19. Additional road capacity to address highway freight bottlenecks.
20. Physical separation of passenger vehicles from commercial motor freight.
21. Enhancement of the resiliency of critical highway infrastructure, including highway infrastructure that supports national energy security, to improve the flow of freight.
22. A highway or bridge project to improve the flow of freight on the NHFN.

In addition, any surface transportation project to improve the flow of freight into and out of a freight intermodal or freight rail facility is an eligible project. 23 U.S.C. 167(i)(5)(C). In accordance with 23 U.S.C. 167 (i)(5)(B), there is a cap on the use of NHFP apportioned funding for these freight intermodal or freight rail projects: For each fiscal year, a State may obligate not more than 10 percent of the total State apportionment under NHFP for these types of projects. These projects include those within the boundaries of public or private freight rail or water facilities (including ports), and that provide surface transportation infrastructure necessary to facilitate direct intermodal interchange, transfer, and access into or out of the facility.

In addition to the eligible projects identified above, a State may use apportioned funds for carrying out diesel retrofit or alternative fuel projects under section 149 for class 8 vehicles; and for the necessary costs of conducting analyses and data collection related to the NHFP, developing and updating freight performance targets, and reporting to the FHWA Administrator to comply with the freight performance targets established pursuant to 23 U.S.C. 150.

The FAST Act introduces a category of project eligible for NHFP funding, known as "intelligent freight transportation systems." This is defined as "innovative or intelligent technological transportation systems, infrastructure, or facilities, including elevated freight transportation facilities in proximity to, or within, an existing right of way on a Federal-aid highway, or that connect land ports-of entry to existing Federal-aid highways; or communications or information processing systems that improve the efficiency, security, or safety of freight movements on the Federal-aid highway system, including to improve the conveyance of freight on dedicated intelligent freight lanes." The law directs the FHWA Administrator to determine whether there is a need for establishing operating standards for intelligent freight transportation systems. 23 U.S.C. 167(k). Further guidance for this provision may be developed as necessary.

ATTACHMENT A

Safety Projects Eligible for 100% Federal Participating Costs
Federal Funds may be utilized at 100% of the project costs for the following:

1. Traffic Control Signalization
2. Maintaining minimum levels of retro reflectivity of highway signs or pavement markings
3. Traffic Circles/Roundabouts
4. Safety Rest Areas
5. Pavement Marking
6. Shoulder and Centerline Rumble Strips and Stripes
7. Commuter Carpooling and Vanpooling
8. Rail-Highway Crossing Closure
9. Installation of Traffic Signs, Traffic Lights, Guardrails, Impact Attenuators, Concrete Barrier Endtreatments, Breakaway Utility Poles, or Priority Control Systems for Emergency Vehicles or Transit Vehicles at Signalizes Intersections

ATTACHMENT C

Guidelines for use of Toll credit Funding

Toll Credits may be used as a match to any federal fund except Emergency Relief

The PMC Policy for the use of Toll Credits is as follows:

1. Any betterment project (Appropriation 582) at the discretion of the District.

2. Construction phase on any Transportation Alternative project where the locals/sponsor have paid for all pre-construction costs.

3. Rail-Highway Grade Crossing Projects.

4. Any exception to the above require PMC approval.

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Appendix E
Project Listing

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Appendix E - Project Listing

					CURRENT		MID-RANGE		LONG RANGE		Total
					TIP +2: FFY 2017-2022		FFY: 2023-2028		FFY: 2029-2042		
SR	Project #	Project Title	Municipality	Mode	Phase	Cost	Phase	Cost	Phase	Cost	
HIGHWAY AND PED/BIKE (LRTP Projects)											
Rank											
1	4	Bayfront Parkway Multimodal Improvements	City of Erie	Highway	PF	$ 6,177,000	RUC*	$ 5,888,000	C*	$ -	$ 12,065,000
2	5a	Erie Loop Bikeway 38th Street	City of Erie	Ped/Bike	PFRUC	$ 1,269,000		$ -		$ -	$ 1,269,000
2	5b	Erie Loop Bikeway Greengarden	City of Erie	Ped/Bike	PF	$ 80,000	C	$ 346,000		$ -	$ 426,000
2	5c	Erie Loop Bikeway French Street	City of Erie	Ped/Bike	PF	$ 73,000	C	$ 317,000		$ -	$ 390,000
3	12	US 6N & PA 99 Intersection	Edinboro Borough	Highway		$ -	PFRUC	$ 1,085,000		$ -	$ 1,085,000
4	31	Waterford Streetscape	Waterford	Highway		$ -	PFRU	$ 4,200,000	C	$ 2,937,000	$ 7,137,000
5	28	I-90 / US 19 / Peach St Signal Upgrades and Coordination	Summit Township	Highway		$ -	PFUC	$ 2,410,000		$ -	$ 2,410,000
6	27	US 6N Springfield Twp RR Underpass	Springfield Township	Highway		$ -	PFRUC	$ 2,630,000		$ -	$ 2,630,000
7	24	SR 89 Enhancements in North East	North East Borough	Highway		$ -	PFRUC	$ 1,296,000		$ -	$ 1,296,000
8	26	SR 89 Hiker-Biker Path to Seaway Trail	North East Township	Ped/Bike		$ -		$ -	PFRUC	$ 22,584,000	$ 22,584,000
9	13	US 6N & PA 98 Intersection Improvements	Elk Creek	Highway		$ -	PFRUC	$ 350,000		$ -	$ 350,000
10	1	Route 6 Bikeway - Corry	City of Corry	Ped/Bike		$ -	PFC	$ 422,000		$ -	$ 422,000
11	6	Gridley Park Parking, Safety, and Multimodal Enhancements	City of Erie	Highway		$ -	PFRUC	$ 555,000		$ -	$ 555,000
12	10	US 6N & Angling Rd Roundabout	Edinboro Borough	Highway		$ -	PFRUC	$ 3,303,000		$ -	$ 3,303,000
13	2	6th Street Bicycle Lanes from Gridley Park East	City of Erie	Ped/Bike		$ -		$ -	PFRUC	$ 586,000	$ 586,000
14	7	West 8th Street Traffic Calming and Streetscape Improvements	City of Erie	Highway		$ -		$ -	PFRUC	$ 6,050,000	$ 6,050,000
15	14	Downtown Fairview Streetscape Improvements*	Fairview Township	Highway		$ -		$ -		$ -	$ -
16	17	US 20 at SR 98 Fairview Signal Retiming*	Fairview Township	Highway		$ -		$ -		$ -	$ -
17	33	Union City Signals Project*	Union City	Highway		$ -		$ -		$ -	$ -
18	30	N Main St at Perry St Intersection Improvement Project	Union City Borough	Highway		$ -		$ -	PFRUC	$ 1,451,000	$ 1,451,000
19	25	Zuck Rd at W 32nd St	Millcreek Township	Highway		$ -		$ -	PFRUC	$ 1,251,000	$ 1,251,000
20	21	Shannon Road SR 4030 Sidewalk Project*	Harborcreek Township, Wesleyville Borough	Ped/Bike		$ -		$ -		$ -	$ -
21	11	US 6N Angling Rd to Maple Dr 3	Edinboro Borough	Highway		$ -		$ -	PFRUC	$ 1,696,000	$ 1,696,000
22	9	PA 99 / Chestnut St / Waterford St Roundabout	Edinboro Borough	Highway		$ -		$ -	PFRUC	$ 4,719,000	$ 4,719,000
23	19	Depot Rd Improvements	Harborcreek Township	Highway		$ -		$ -		$ -	$ -
24	16	US 20 at Olde Ridge Rd Intersection Reconfiguration with Multimodal Enhancements	Fairview Township	Highway		$ -		$ -	PFRUC	$ 4,511,000	$ 4,511,000
25	23	US 5 at W 12th St at Asbury Rd	Millcreek Township	Highway		$ -		$ -		$ -	$ -
26	20	Iroquois Avenue at Nagle Rd Intersection Improvement Project & Signal Upgrades*	Harborcreek Township, Lawrence Park Township	Highway		$ -		$ -		$ -	$ -
27	15	Rt 5 at Hardscrabble Rd Intersection Realignment	Fairview Township	Highway		$ -		$ -	PFRUC	$ 1,926,000	$ 1,926,000
28	32	US 6 at Beaver Dam Rd Intersection Improvement Project	Wayne Township	Highway		$ -		$ -	PFRUC	$ 1,351,000	$ 1,351,000
29	22	Heidler Rd from Pebble Creek Dr to Walnut Creek Middle School Safe Routes to School Sidewalks*	Millcreek Township	Ped/Bike		$ -		$ -		$ -	$ -
30	18	Walnut Creek Parking & Traffic Calming Improvements*	Fairview Township	Highway		$ -		$ -		$ -	$ -
31	8	Gore Rd at Cherry St Intersection Improvement Project*	City of Erie, Millcreek Township	Highway		$ -		$ -		$ -	$ -
32	29	US 19 at Oliver Rd	Summit Township	Highway		$ -		$ -	PFRUC	$ 1,125,000	$ 1,125,000
32	3	Bayfront Parkway at 6th St Intersection Improvements	City of Erie	Highway		$ -		$ -	PFRUC	$ 564,000	$ 564,000

S = Study, P = Preliminary Engineering, F = Final Engineering, R = Right-of-Way, U = Utilities, C = Construction

*project not anticipated to be funded through estimated state and federal sources in the timeframe of the LRTP; consider alternate funding sources and fund additional projects as other projects are completed

*Construction phase assumed to be funded through alternate sources; construction to be assumed in mid-range through long-range for NEPA planning purposes

Appendix E - Project Listing

					CURRENT		MID-RANGE		LONG RANGE		Total
					TIP +2: FFY 2017-2022		FFY: 2023-2028		FFY: 2029-2042		
SR	Project #	Project Title	Municipality	Mode	Phase	Cost	Phase	Cost	Phase	Cost	
HIGHWAY / OTHER (Transportation Improvement Program TIP and Twelve Year Plan TYP Projects)											
	106439	Erie 2017 AWPM		Highway/Other TYP	C	$ 95,000		$ -		$ -	$ 95,000
	106440	Erie 2018 AWPM		Highway/Other TYP	C	$ 95,000		$ -		$ -	$ 95,000
	106441	Erie 2019 AWPM		Highway/Other TYP	C	$ 95,000		$ -		$ -	$ 95,000
	106442	Erie 2020 AWPM		Highway/Other TYP	C	$ 95,000		$ -		$ -	$ 95,000
89	106446	SR 89 & SR 430 Intersecti	Greenfield Township	Highway/Other TYP	C	$ 360,000		$ -		$ -	$ 360,000
	106865	Caughey Road ADA Ramps	Millcreek Township	Highway/Other TYP	C	$ 400,000		$ -		$ -	$ 400,000
19	107348	Peach St. Safety & Mobility	Millcreek Township	Highway/Other TYP	PFRUC	$ 730,000		$ -		$ -	$ 730,000
20	106766	SR 20 & SR 832 ADA Ramps	Millcreek Township	Highway/Other TYP	PC	$ 1,520,000		$ -		$ -	$ 1,520,000
531	106586	SR 531: Depot Road, Section 4	Harborcreek Township	Highway/Other TYP	PFRUC	$ 1,640,000		$ -		$ -	$ 1,640,000
5	99703	SR 5: Lake Road	North East Township	Highway/Other TYP	C	$ 1,800,000		$ -		$ -	$ 1,800,000
197	99706	SR 197: SR 8 to SR 19	Union City Borough	Highway/Other TYP	C	$ 2,100,000		$ -		$ -	$ 2,100,000
4010	102075	PA 699 & Hershey Road	Summit Township	Highway/Other TYP	FRUC	$ 2,230,000		$ -		$ -	$ 2,230,000
197	99007	PA 197: Waterford-Robinson	Waterford Township	Highway/Other TYP	C	$ 2,250,000		$ -		$ -	$ 2,250,000
19	91394	N Waterford Improvements	Waterford Borough	Highway/Other TYP	C	$ 2,507,000		$ -		$ -	$ 2,507,000
4008	102069	Hamot Rd/Oliver Rd Intersection	Summit Township	Highway/Other TYP	FRUC	$ 2,604,000		$ -		$ -	$ 2,604,000
98	105776	PA 98/Sterrettania Rd Int	Fairview Township	Highway/Other TYP	FRUC	$ 2,735,000		$ -		$ -	$ 2,735,000
290	104463	PA 290/Buffalo Road Int	Erie City	Highway/Other TYP	RUC	$ 3,080,000		$ -		$ -	$ 3,080,000
8	106444	Pine Ave/Old French Rd/28	Erie City	Highway/Other TYP	PFRUC	$ 3,223,000		$ -		$ -	$ 3,223,000
3020	98999	West Rd: PA 832 to PA 99	Mckean Township	Highway/Other TYP	C	$ 3,400,000		$ -		$ -	$ 3,400,000
531	102468	PA 531: Depot Road, Section 2	Harborcreek Township	Highway/Other TYP	PFRUC	$ 4,520,000		$ -		$ -	$ 4,520,000
90	102031	I-90: MP 0 to 3.5, Reconstruct	Springfield Township	Highway/Other TYP	FRUC	$ 40,260,874		$ -		$ -	$ 40,260,874
90	102039	I-90: MP 3.5 to 7, Reconstruct	Springfield Township	Highway/Other TYP	PFRUC	$ 42,193,074		$ -		$ -	$ 42,193,074
90	102040	I-90: MP 7 to 10.5, Reconstruct	Girard Township	Highway/Other TYP	C	$ 54,178,914		$ -		$ -	$ 54,178,914

S = Study, P = Preliminary Engineering, F = Final Engineering, R = Right-of-Way, U = Utilities, C = Construction

Appendix E - Project Listing

					CURRENT		MID-RANGE		LONG RANGE		Total
					TIP +2: FFY 2017-2022		FFY: 2023-2028		FFY: 2029-2042		
SR	Project #	Project Title	Municipality	Mode	Phase	Cost	Phase	Cost	Phase	Cost	
HIGHWAY / OTHER (Transportation Improvement Program TIP and Twelve Year Plan TYP Projects)											
5	99057	PA 5: Gorman-Brewster	Millcreek Township	Highway/Other TYP		$ -	PFRUC	$ 1,100,000		$ -	$ 1,100,000
20	99059	US 20: Millfair - Brown	Millcreek Township	Highway/Other TYP		$ -	PFRUC	$ 1,150,000		$ -	$ 1,150,000
290	99056	PA 290 & 12th St Signals	Erie City	Highway/Other TYP		$ -	PFRUC	$ 2,025,000		$ -	$ 2,025,000
19	98333	SR 19: 38th St to 26th St	Erie City	Highway/Other TYP		$ -	C	$ 2,300,000		$ -	$ 2,300,000
20	99707	SR 20: Imperial Pt-SR 98	Girard Township	Highway/Other TYP		$ -	C	$ 2,400,000		$ -	$ 2,400,000
5	90286	PA 5: West 12th Street	Erie City	Highway/Other TYP		$ -	C	$ 2,750,000		$ -	$ 2,750,000
19	98308	SR 19: Dorn Rd-Robinson	Summit Township	Highway/Other TYP		$ -	C	$ 3,300,000		$ -	$ 3,300,000
8	99049	PA 8: Bldwin-N. of Casier	Amity Township	Highway/Other TYP		$ -	C	$ 3,750,000		$ -	$ 3,750,000
4010	98322	SR 4010:Hershey Rd-SR 99	Millcreek Township	Highway/Other TYP		$ -	C	$ 3,750,000		$ -	$ 3,750,000
20	99015	US 20: H2O St-Walbridge	Harborcreek Township	Highway/Other TYP		$ -	C	$ 4,000,000		$ -	$ 4,000,000
290	99000	SR 290:Bayfront Connector	Erie City	Highway/Other TYP		$ -	C	$ 4,500,000		$ -	$ 4,500,000
3006	98338	US 6N & Angling Road	Edinboro Borough	Highway/Other TYP		$ -	PFRUC	$ 4,515,000		$ -	$ 4,515,000
19	97888	Peach Street Turning Lane	Summit Township	Highway/Other TYP		$ -	C	$ 11,000,000		$ -	$ 11,000,000
197	101502	SR 197 & I-90 Interchange	Summit Township	Highway/Other TYP		$ -	PFRUC	$ 20,000,000		$ -	$ 20,000,000
90	102044	I-90: MP 14.5 - 18, Reconstruct	Fairview Township	Highway/Other TYP		$ -	RUC	$ 51,479,302		$ -	$ 51,479,302
90	102041	I-90: MP 10.5 to 14.5, Reconstruct	Girard Township	Highway/Other TYP		$ -	PFRUC	$ 65,446,359		$ -	$ 65,446,359
	106424	Erie Betterment Line Item		Highway/Other TYP		$ -		$ -		$ -	$ -
	106421	Erie Highway/Bridge Line		Highway/Other TYP		$ -		$ -		$ -	$ -
	98256	Erie Local Brdg Line Item		Highway/Other TYP		$ -		$ -		$ -	$ -
	106874	Erie Local Fed Aid Rt Line item		Highway/Other TYP		$ -		$ -		$ -	$ -

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Appendix E - Project Listing

					CURRENT		MID-RANGE		LONG RANGE		Total
					TIP +2: FFY 2017-2022		FFY: 2023-2028		FFY: 2029-2042		
SR	Project #	Project Title	Municipality	Mode	Phase	Cost	Phase	Cost	Phase	Cost	
DISTRICT BRIDGES (Transportation Improvement Program TIP and Twelve Year Plan TYP Projects)											
430	97125	SR 430 Brdg/Mitchell Run	Harborcreek Township	Bridge TYP	FRC	$ 100,000		$ -		$ -	$ 100,000
	85372	Pinetree Rd T-585 Bridge	Mckean Township	Bridge TYP	C	$ 160,000		$ -		$ -	$ 160,000
1006	93620	SR 1006/12 Mile Ck Brnch	North East Township	Bridge TYP	C	$ 175,000		$ -		$ -	$ 175,000
1004	97222	SR 1004 Brdg/Townley Run	Greenfield Township	Bridge TYP	FC	$ 350,000		$ -		$ -	$ 350,000
2006	106443	Erie 2019 Bridge Shotcret	Amity Township	Bridge TYP	PC	$ 380,000		$ -		$ -	$ 380,000
197	72613	PA 197 Bridge/French Ck T	Union Township	Bridge TYP	RUC	$ 510,000		$ -		$ -	$ 510,000
3017	88474	SR 3017 over Temple Creek	Elk Creek Township	Bridge TYP	FC	$ 600,000		$ -		$ -	$ 600,000
	833	Elmwood Rd Br T-324	Springfield Township	Bridge TYP	C	$ 700,000		$ -		$ -	$ 700,000
6	88605	SR 6 over Keppels Run	Corry City	Bridge TYP	FRC	$ 700,000		$ -		$ -	$ 700,000
3010	97126	SR 3010 Br/Cssg Ck W Brch	Elk Creek Township	Bridge TYP	FRC	$ 860,000		$ -		$ -	$ 860,000
89	95613	Erie Preserve Br Group	Amity Township	Bridge TYP	C	$ 1,000,000		$ -		$ -	$ 1,000,000
	1180	Niemeyer Road (T-463) Br	Waterford Township	Bridge TYP	C	$ 1,137,500		$ -		$ -	$ 1,137,500
3014	88463	SR 3014 over I-79	Franklin Township	Bridge TYP	FRC	$ 1,250,000		$ -		$ -	$ 1,250,000
20	1172	US 20 over CN RR	Girard Township	Bridge TYP	FRC	$ 1,450,000		$ -		$ -	$ 1,450,000
2006	88462	SR 2006 over French Creek	Waterford Township	Bridge TYP	FRC	$ 1,510,000		$ -		$ -	$ 1,510,000
19	600	US 19 over LeBoeuf Creek	Waterford Township	Bridge TYP	RUC	$ 1,700,000		$ -		$ -	$ 1,700,000
	58232	McBride Viaduct	Erie City	Bridge TYP	UC	$ 2,480,000		$ -		$ -	$ 2,480,000
20	1271	US 20 Bridge over Elk Cre	Girard Township	Bridge TYP	RUC	$ 3,200,000		$ -		$ -	$ 3,200,000
699	47505	PA 699: Ednbro Rd/I-90 Br	Summit Township	Bridge TYP	FRC	$ 4,150,000		$ -		$ -	$ 4,150,000
20	97205	SR 20 Brdg/16 Mile Creek	North East Township	Bridge TYP		$ -	FRC	$ 360,000		$ -	$ 360,000
20	88472	SR 20 over Trout Run	Fairview Township	Bridge TYP		$ -	FRC	$ 360,000		$ -	$ 360,000
5	97170	SR 5 Brdg/Wensel Run	Millcreek Township	Bridge TYP		$ -	FRC	$ 360,000		$ -	$ 360,000
505	97213	SR 505 Brdg/Mill Ck #2	Millcreek Township	Bridge TYP		$ -	FRC	$ 360,000		$ -	$ 360,000
505	97214	SR 505 Brdg/Mill Creek #1	Millcreek Township	Bridge TYP		$ -	FRC	$ 360,000		$ -	$ 360,000
97	622	SR 97: French Ck Brdg		Bridge TYP		$ -	FRC	$ 360,000		$ -	$ 360,000
1013	97221	SR 1013 Bridge/I-90	North East Township	Bridge TYP		$ -	FRC	$ 960,000		$ -	$ 960,000
4105	97171	SR 4105 Bridge over I-90	Summit Township	Bridge TYP		$ -	FRC	$ 1,110,000		$ -	$ 1,110,000
1006	47508	Moorheadville Rd Br/I-90	North East Township	Bridge TYP		$ -	FRC	$ 1,150,000		$ -	$ 1,150,000
3006	97241	SR 3006 Brdg/Conneaut Ck	Conneaut Township	Bridge TYP		$ -	FRC	$ 1,150,000		$ -	$ 1,150,000
8	97215	SR 8 Brdg/Fr. Ck. W. Brch	Wattsburg Borough	Bridge TYP		$ -	FRC	$ 1,200,000		$ -	$ 1,200,000
4011	97243	SR 4011 Brdg/Walnut Ck	Millcreek Township	Bridge TYP		$ -	FRC	$ 1,300,000		$ -	$ 1,300,000
1001	97150	SR 1001 Brdg/Fr Ck N Brch	Amity Township	Bridge TYP		$ -	FRC	$ 1,700,000		$ -	$ 1,700,000
3020	97226	SR 3020 Brdg over Elk Ck	Mckean Township	Bridge TYP		$ -	FRC	$ 1,800,000		$ -	$ 1,800,000
1103	1280	Remington Rd/I-90	North East Township	Bridge TYP		$ -	C	$ 3,250,000		$ -	$ 3,250,000
4108	47501	SR 4108: Jordan Rd/I-90	Harborcreek Township	Bridge TYP		$ -	FRC	$ 3,450,000		$ -	$ 3,450,000

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Appendix E - Project Listing

					CURRENT		MID-RANGE		LONG RANGE		Total
					TIP +2: FFY 2017-2022		FFY: 2023-2028		FFY: 2029-2042		
SR	Project #	Project Title	Municipality	Mode	Phase	Cost	Phase	Cost	Phase	Cost	
DISTRICT BRIDGES (Beyond the Twelve Year Plan TYP)											
4106	97218	SR 4106 Bridge/I-90	Summit Township	State Bridge Non-TYP	FRC	$ 800,000		$ -		$ -	$ 800,000
3008	97173	SR 3008 Brdg/Temple Creek	Cranesville Borough	State Bridge Non-TYP	FRC	$ 500,000		$ -		$ -	$ 500,000
79	97133	I-79 NBBrdg/ SR 3006 (6N)	Washington Township	State Bridge Non-TYP	FC	$ 200,000		$ -		$ -	$ 200,000
1004	97230	SR 1004/Fr. Ck. W. Brch	Greenfield Township	State Bridge Non-TYP	FC	$ 70,000		$ -		$ -	$ 70,000
2014	97154	SR 2014/Fr. Ck. S. Brch	Concord Township	State Bridge Non-TYP	FC	$ 60,000		$ -		$ -	$ 60,000
3105	82927	Beckman Road/I-90	Girard Township	State Bridge Non-TYP		$ -	PFRC	$ 3,500,000		$ -	$ 3,500,000
8170	72647	SR 8170 Brdg/Rohl Road	Greenfield Township	State Bridge Non-TYP		$ -	PFRC	$ 1,200,000		$ -	$ 1,200,000
3004	1123	SR 3004: Carter Rd Brdg	Conneaut Township	State Bridge Non-TYP		$ -	FRC	$ 550,000		$ -	$ 550,000
20	97208	SR 20 Brdg/Unknown Stream	Harborcreek Township	State Bridge Non-TYP		$ -	FRC	$ 460,000		$ -	$ 460,000
6	97240	SR 6 Brdg/Fr. Ck. Trib	Le Boeuf Township	State Bridge Non-TYP		$ -	FRC	$ 460,000		$ -	$ 460,000
4015	90147	SR 4015/Cascade Ck Branch	Millcreek Township	State Bridge Non-TYP		$ -	PFRC	$ 270,000		$ -	$ 270,000
1001	97127	SR 1001 Brdg/Leboeuf Ck	Greene Township	State Bridge Non-TYP		$ -	FRC	$ 210,000		$ -	$ 210,000
20	97140	SR 20 Brdg/Dumbleton Run	Harborcreek Township	State Bridge Non-TYP		$ -	FRC	$ 210,000		$ -	$ 210,000
20	93163	SR 20 over Grape Run	North East Township	State Bridge Non-TYP		$ -	PFRC	$ 210,000		$ -	$ 210,000
5	97142	SR 5 Brdg/Trib Lake Erie	Springfield Township	State Bridge Non-TYP		$ -	FRC	$ 210,000		$ -	$ 210,000
8170	97232	SR 8170 WB Brdg/I-90	Greenfield Township	State Bridge Non-TYP		$ -	FC	$ 210,000		$ -	$ 210,000
89	97235	SR 89 Brdg/Lilley Run	Concord Township	State Bridge Non-TYP		$ -	FRC	$ 210,000		$ -	$ 210,000
98	97143	SR 98 Brdg/Cswg Ck Branch	Franklin Township	State Bridge Non-TYP		$ -	FRC	$ 210,000		$ -	$ 210,000
79	97134	I-79 SB Brdg/SR 3006 (6N)	Washington Township	State Bridge Non-TYP		$ -	FC	$ 200,000		$ -	$ 200,000
20	97139	SR 20 Brdg/Lake Erie Trib	Harborcreek Township	State Bridge Non-TYP		$ -	FRC	$ 170,000		$ -	$ 170,000

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					CURRENT		MID-RANGE		LONG RANGE		Total
					TIP +2: FFY 2017-2022		FFY: 2023-2028		FFY: 2029-2042		
SR	Project #	Project Title	Municipality	Mode	Phase	Cost	Phase	Cost	Phase	Cost	
DISTRICT BRIDGES (Beyond the Twelve Year Plan TYP)											
299	1211	SR 299 Bridge/CSX & NS RR	Millcreek Township	State Bridge Non-TYP		$ -	FC	$ 160,000		$ -	$ 160,000
8170	97137	SR 8170 Brdg/I-90	Greenfield Township	State Bridge Non-TYP		$ -	FC	$ 160,000		$ -	$ 160,000
5	97157	SR 5 Brdg/CSX Railroad	Erie City	State Bridge Non-TYP		$ -	FC	$ 150,000		$ -	$ 150,000
86	88468	I-86 WB over French Ck	Greenfield Township	State Bridge Non-TYP		$ -	PFRC	$ 110,000		$ -	$ 110,000
89	97160	SR 89/Fr. Ck. W. Brch	Greenfield Township	State Bridge Non-TYP		$ -	FC	$ 110,000		$ -	$ 110,000
2011	97151	SR 2011 Br/Fr. Ck S. Brch	Union City Borough	State Bridge Non-TYP		$ -	FC	$ 90,000		$ -	$ 90,000
3008	97191	SR 3008 Brdg/Cnntee Ck	Washington Township	State Bridge Non-TYP		$ -	FC	$ 70,000		$ -	$ 70,000
4007	97189	SR 4007 Bridge over I-90	Fairview Township	State Bridge Non-TYP		$ -	FC	$ 70,000		$ -	$ 70,000
1006	97155	SR 1006/Scott Run W. Brch	North East Township	State Bridge Non-TYP		$ -	FC	$ 60,000		$ -	$ 60,000
1012	97182	SR 1012 Brdg/Averill Run	North East Township	State Bridge Non-TYP		$ -	FC	$ 60,000		$ -	$ 60,000
20	97233	SR 20 Brdg/8 Mile Ck Brch	Harborcreek Township	State Bridge Non-TYP		$ -	FC	$ 60,000		$ -	$ 60,000
2010	97166	SR 2010 Brdg/Lilley Run	Concord Township	State Bridge Non-TYP		$ -	FC	$ 60,000		$ -	$ 60,000
2019	97129	SR 2019 Br/Fr. Ck. S. Brh	Concord Township	State Bridge Non-TYP		$ -	FC	$ 60,000		$ -	$ 60,000
2019	97216	SR 2019 Brdg/Beaver Run	Concord Township	State Bridge Non-TYP		$ -	FC	$ 60,000		$ -	$ 60,000
2022	97135	SR 2022 Brdg/Spencer Run	Wayne Township	State Bridge Non-TYP		$ -	FC	$ 60,000		$ -	$ 60,000
2026	88470	SR 2026 over Hubbell Run	Amity Township	State Bridge Non-TYP		$ -	PFRC	$ 60,000		$ -	$ 60,000
3001	97184	SR 3001 Br/Cnnt Ck W Brch	Conneaut Township	State Bridge Non-TYP		$ -	FC	$ 60,000		$ -	$ 60,000
3002	72410	SR 3002 Brdg/Conneaut Ck	Conneaut Township	State Bridge Non-TYP		$ -	FC	$ 60,000		$ -	$ 60,000
3008	97190	SR 3008 Brdg/Sheng Creek	Washington Township	State Bridge Non-TYP		$ -	FC	$ 60,000		$ -	$ 60,000
3008	97200	SR 3008/Lil Elk Ck S Brch	Elk Creek Township	State Bridge Non-TYP		$ -	FC	$ 60,000		$ -	$ 60,000
3011	97242	SR 3011 Br/Cnnt Ck W Brch	Conneaut Township	State Bridge Non-TYP		$ -	FC	$ 60,000		$ -	$ 60,000

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SR	Project #	Project Title	Municipality	Mode	Phase	Cost	Phase	Cost	Phase	Cost	
DISTRICT BRIDGES (Beyond the Twelve Year Plan TYP)											
3017	97130	SR 3017 Brdg/Temple Ck	Elk Creek Township	State Bridge Non-TYP		$ -	FC	$ 60,000		$ -	$ 60,000
3018	97186	SR 3018 Bridge over I-90	Girard Township	State Bridge Non-TYP		$ -	FC	$ 60,000		$ -	$ 60,000
3025	74677	SR 3025/Lt. Coneatee Ck.	Washington Township	State Bridge Non-TYP		$ -	PFRC	$ 60,000		$ -	$ 60,000
3031	97181	SR 3031 Brdg/Halls Run	Platea Borough	State Bridge Non-TYP		$ -	FC	$ 60,000		$ -	$ 60,000
6	97194	SR 6 Brdg/French Creek	Le Boeuf Township	State Bridge Non-TYP		$ -	FC	$ 60,000		$ -	$ 60,000
6	97152	SR 6 Brdg/Slaughter Run	Wayne Township	State Bridge Non-TYP		$ -	FC	$ 60,000		$ -	$ 60,000
89	97158	SR 89 Brdg/Bailey Brook	Venango Township	State Bridge Non-TYP		$ -	FC	$ 60,000		$ -	$ 60,000
89	97236	SR 89 Brdg/Fr. Ck Brch 2	Venango Township	State Bridge Non-TYP		$ -	FC	$ 60,000		$ -	$ 60,000
89	97168	SR 89 Brdg/Fr. Ck. Branch	Concord Township	State Bridge Non-TYP		$ -	FC	$ 60,000		$ -	$ 60,000
90	96360	Erie Bridge Group Design	North East Township	State Bridge Non-TYP		$ -		$ -	CP	$ 4,400,000	$ 4,400,000
1104	1117	Bort Road Brdg over I-90	North East Township	State Bridge Non-TYP		$ -		$ -	FRC	$ 3,250,000	$ 3,250,000
1019	1288	Gay Road over I-90	North East Township	State Bridge Non-TYP		$ -		$ -	PFRC	$ 3,250,000	$ 3,250,000
1102	47502	SR 1102:Shaddock Rd/I-90	North East Township	State Bridge Non-TYP		$ -		$ -	FRC	$ 3,250,000	$ 3,250,000
1013	97176	SR 1013 Bridge over I-86	Greenfield Township	State Bridge Non-TYP		$ -		$ -	FRC	$ 750,000	$ 750,000
4107	47500	Moore House Rd/I-90 Br	Millcreek Township	State Bridge Non-TYP		$ -		$ -	FRC	$ 700,000	$ 700,000
4030	97132	SR 4030 Br/BPRR & 4 Mi Ck	Harborcreek Township	State Bridge Non-TYP		$ -		$ -	FRC	$ 510,000	$ 510,000
4018	98161	SR 4018/McDannell Run		State Bridge Non-TYP		$ -		$ -	FRC	$ 350,000	$ 350,000
699	93165	SR 699 over Stancliff Rd	Mckean Township	State Bridge Non-TYP		$ -		$ -	PFRC	$ 350,000	$ 350,000
474	72619	SR 474 Brdg/Spafford Run	Venango Township	State Bridge Non-TYP		$ -		$ -	PFRC	$ 270,000	$ 270,000
19	97204	SR 19 Brdg/Fr. Ck. Trib	Le Boeuf Township	State Bridge Non-TYP		$ -		$ -	FRC	$ 260,000	$ 260,000
8	97209	SR 8 Brdg/Alder Brook #1	Venango Township	State Bridge Non-TYP		$ -		$ -	FRC	$ 260,000	$ 260,000
1017	97223	SR 1017 Brdg/Averill Run	North East Township	State Bridge Non-TYP		$ -		$ -	FRC	$ 210,000	$ 210,000
8	97175	SR 8 Br/LeBoeuf Ck Trib	Greene Township	State Bridge Non-TYP		$ -		$ -	FRC	$ 210,000	$ 210,000
8	97210	SR 8 Brdg over Sutter Run	Venango Township	State Bridge Non-TYP		$ -		$ -	FRC	$ 210,000	$ 210,000
8	97211	SR 8 Brdg/Alder Brook #2	Venango Township	State Bridge Non-TYP		$ -		$ -	FRC	$ 210,000	$ 210,000

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					TIP +2: FFY 2017-2022		FFY: 2023-2028		FFY: 2029-2042		
SR	Project #	Project Title	Municipality	Mode	Phase	Cost	Phase	Cost	Phase	Cost	
DISTRICT BRIDGES (Beyond the Twelve Year Plan TYP)											
89	72500	SR 89 Brdg/Hubble Run	Amity Township	State Bridge Non-TYP		$ -		$ -	PFRC	$ 210,000	$ 210,000
5	97149	SR 5 Br/Turkey Ck Trib #1	Springfield Township	State Bridge Non-TYP		$ -		$ -	FC	$ 200,000	$ 200,000
5	97165	SR 5 Brdg/16 Mile Creek	North East Township	State Bridge Non-TYP		$ -		$ -	FC	$ 200,000	$ 200,000
5	97163	SR 5 Brdg/20 Mile Creek	North East Township	State Bridge Non-TYP		$ -		$ -	FC	$ 200,000	$ 200,000
5	97146	SR 5 Brdg/Turkey Creek #3	Springfield Township	State Bridge Non-TYP		$ -		$ -	FC	$ 200,000	$ 200,000
290	97178	SR 290 Br/Broad St-SR 20	Erie City	State Bridge Non-TYP		$ -		$ -	FC	$ 110,000	$ 110,000
8	97174	SR 8 Br/LeBoeuf Ck E Brch	Greene Township	State Bridge Non-TYP		$ -		$ -	FC	$ 110,000	$ 110,000
4034	97202	SR 4034 Brdg/CSX Railroad	Erie City	State Bridge Non-TYP		$ -		$ -	FC	$ 70,000	$ 70,000
5	97188	SR 5 Brdg/Raccoon Creek	Springfield Township	State Bridge Non-TYP		$ -		$ -	FC	$ 70,000	$ 70,000
8	97206	SR 8 Bridge/Mill Creek	Millcreek Township	State Bridge Non-TYP		$ -		$ -	FRC	$ 70,000	$ 70,000
98	97192	SR 98 Brdg/Cswago Ck	Elk Creek Township	State Bridge Non-TYP		$ -		$ -	FC	$ 70,000	$ 70,000
3014	97185	SE 3014 Brdg/ Lil Cnnt Ck	Washington Township	State Bridge Non-TYP		$ -		$ -	FC	$ 60,000	$ 60,000
1001	97136	SR 1001 Brdg/Mill Creek	Millcreek Township	State Bridge Non-TYP		$ -		$ -	FC	$ 60,000	$ 60,000
2025	72641	SR 2025 Brdg/Hare Creek	Corry City	State Bridge Non-TYP		$ -		$ -	PFC	$ 60,000	$ 60,000
3014	97131	SR 3014 Brdg/Edin Lk Trib	Washington Township	State Bridge Non-TYP		$ -		$ -	FC	$ 60,000	$ 60,000
3022	97164	SR 3022 Brdg/Darrows Ck	Washington Township	State Bridge Non-TYP		$ -		$ -	FC	$ 60,000	$ 60,000
4034	97179	SR 4034 Br/Cascade Ck #1	Erie City	State Bridge Non-TYP		$ -		$ -	FC	$ 60,000	$ 60,000
4034	97180	SR 4034 Br/Cascade Ck #2	Erie City	State Bridge Non-TYP		$ -		$ -	FC	$ 60,000	$ 60,000

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					TIP +2: FFY 2017-2022		FFY: 2023-2028		FFY: 2029-2042		
SR	Project #	Project Title	Municipality	Mode	Phase	Cost	Phase	Cost	Phase	Cost	
LOCAL BRIDGES *this project listing is unprioritized and cost estimates may be outdated											
-	1023	Depot St-T628 7 Mile Ck	Harborcreek Township	Local Bridge Non-TYP	PFRC	$ 450,000		$ -		$ -	$ 450,000
-	1019	Old Sterrett. Br. T-406	Millcreek Township	Local Bridge Non-TYP	PFRC	$ 880,000		$ -		$ -	$ 880,000
-	1179	W. South St. Viaduct	Erie City	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 4,020,000	$ 4,020,000
-	1048	Zimmerly Rd/I-79 BR	Millcreek Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 2,150,000	$ 2,150,000
-	85349	Greenlee Rd T-549 Bridge	Mckean Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 1,400,000	$ 1,400,000
-	945	Erie Zoo Drive Bridge	Erie City	Local Bridge Non-TYP		$ -		$ -	PFRUC	$ 1,266,298	$ 1,266,298
-	836	Gudgeonville Rd Br T-400	Girard Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 1,265,000	$ 1,265,000
-	944	Bort Rd Br T-780 over RR	North East Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 1,250,000	$ 1,250,000
-	85306	Cooper Rd T-717/4 mile Ck	Harborcreek Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 1,175,000	$ 1,175,000
-	85287	Francis Rd T-479 Bridge	Girard Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 1,175,000	$ 1,175,000
-	85363	Millfair Rd T-442 Bridge	Millcreek Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 1,175,000	$ 1,175,000
-	1035	Dewey Rd (T-636) Brdg	Le Boeuf Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 1,006,000	$ 1,006,000
-	78443	Old Rte 99/Lamson Run #1	Mckean Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 950,000	$ 950,000
-	78444	Old Rte 99/Lamson Run #2	Mckean Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 950,000	$ 950,000
-	78451	Old Rte 99/Lamson Run #3	Mckean Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 950,000	$ 950,000
-	79220	T480 Old RT 99	Mckean Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 950,000	$ 950,000
-	79221	T-480 over Lamson Run #2	Mckean Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 950,000	$ 950,000
-	852	Malbett Place (T-690) Brg	Harborcreek Township	Local Bridge Non-TYP		$ -		$ -	FRC	$ 938,000	$ 938,000
-	85358	Cider Mill Rd (T-928) Br	Millcreek Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 925,000	$ 925,000
-	85284	Haskell Hill Rd (T-559)	Amity Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 925,000	$ 925,000
-	85357	Saybrook Place T-340 Br	Millcreek Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 925,000	$ 925,000
-	85369	T-300 Bridge/Trout Run	Waterford Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 925,000	$ 925,000
-	85366	T-348 Br/Crooked Ck	Springfield Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 925,000	$ 925,000
-	1046	Turner Rd (T-305) Brdg	Greene Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 925,000	$ 925,000
-	907	Van Camp Rd Br (T-515)	Fairview Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 925,000	$ 925,000
-	85362	Evans Rd T-665 Bridge	Millcreek Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 900,000	$ 900,000
-	85288	S Creek Rd T-390 Bridge	Girard Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 875,000	$ 875,000
-	905	State Line Rd Br T-300	Conneaut Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 875,000	$ 875,000
-	1043	Mill Rd (T-826) Brdg	Wayne Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 859,000	$ 859,000
-	1040	O'Neil Rd (T-302) Brdg	Union Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 846,000	$ 846,000
-	668	T-516 Brdg/Walnut Ck	Millcreek Township	Local Bridge Non-TYP		$ -		$ -	FRC	$ 833,000	$ 833,000
-	85285	Sherrod Hill Rd T-313 Br	Elk Creek Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 825,000	$ 825,000
-	79219	T480 over Lamson Run	Mckean Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 810,000	$ 810,000
-	79177	T-360 over Cnnt Ck E. Br	Conneaut Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 795,000	$ 795,000
-	1016	Fourth St Bridge	Waterford Borough	Local Bridge Non-TYP		$ -		$ -	PFRUC	$ 785,000	$ 785,000
-	832	S Hazel St Wtrfrd Br	Waterford Borough	Local Bridge Non-TYP		$ -		$ -	PFRUC	$ 770,000	$ 770,000
-	85364	Middle Rd T-301 Br	North East Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 750,000	$ 750,000
-	79217	Hardscrabble Road Bridge	Venango Township	Local Bridge Non-TYP		$ -		$ -	FRC	$ 710,000	$ 710,000
-	85344	Buman Rd T-575 Bridge	Mckean Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 700,000	$ 700,000
-	85374	California Rd T-609 Br	Mckean Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 700,000	$ 700,000

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Appendix E - Project Listing

					CURRENT		MID-RANGE		LONG RANGE		Total
					TIP +2: FFY 2017-2022		FFY: 2023-2028		FFY: 2029-2042		
SR	Project #	Project Title	Municipality	Mode	Phase	Cost	Phase	Cost	Phase	Cost	
LOCAL BRIDGES *this project listing is unprioritized and cost estimates may be outdated											
-	85345	California Rd T-609 Br.	Mckean Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 700,000	$ 700,000
-	85377	Dunn Valley Rd T-490 Br	Mckean Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 700,000	$ 700,000
-	85332	W Stancliff Rd T-481 Brdg	Mckean Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 700,000	$ 700,000
-	85371	W. Stancliff Rd T-481 Br	Mckean Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 700,000	$ 700,000
-	902	Akerley Rd Br T-883	Conneaut Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 690,000	$ 690,000
-	79216	Brickyard Rd Bridge	North East Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 690,000	$ 690,000
-	85328	Belle Rd T-303 Bridge	Harborcreek Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 675,000	$ 675,000
-	85368	Hamot Road T-534 Bridge	Summit Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 675,000	$ 675,000
-	85330	Highmeyer Rd T-650 Bridge	Harborcreek Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 675,000	$ 675,000
-	85370	Sawmill Road Bridge	Harborcreek Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 675,000	$ 675,000
-	85355	Bargain Rd T-490 Bridge	Mckean Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 650,000	$ 650,000
-	1041	Moore Rd (T-415) Brdg	Le Boeuf Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 645,000	$ 645,000
-	85286	Eurekra Rd T-434 Bridge	Franklin Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 625,000	$ 625,000
-	927	Page Rd (T-675) Brdg	Venango Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 610,000	$ 610,000
-	71898	Depot St. T-628	Mill Village Borough	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 600,000	$ 600,000
-	926	Knoyle Rd (T-701) Brdg	Venango Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 585,000	$ 585,000
-	85367	Old French Rd T-558 Br	Summit Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 575,000	$ 575,000
-	834	McKee Road Bridge T-338	Conneaut Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 555,000	$ 555,000
-	1015	Erie Street Bridge	Edinboro Borough	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 552,000	$ 552,000
-	85318	Backus Rd T-666 Bridge	Harborcreek Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 550,000	$ 550,000
-	85353	Oliver Rd T-512 Bridge #2	Mckean Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 550,000	$ 550,000
-	1038	Benson Rd (T-600) Brdg	Waterford Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 500,000	$ 500,000
-	1014	Neimeyer Rd (T-463) Brdg	Waterford Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 480,000	$ 480,000
-	1017	Ashton Rd (T-994) Brdg	Greenfield Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 479,000	$ 479,000
-	1047	Donation Road (T-602) Brd	Greene Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 471,000	$ 471,000
-	1039	Etter Rd (T-300) Brdg	Greene Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 454,000	$ 454,000
-	1036	Union-LeBoeu (T-672) Brdg	Union Township	Local Bridge Non-TYP		$ -		$ -	FRC	$ 433,000	$ 433,000
-	1045	Raymond Rd (T-721) Brdg	Greenfield Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 430,000	$ 430,000
-	1044	Wellington Street Brdg	North East Borough	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 411,000	$ 411,000
-	915	Lake Street Bridge	Girard Borough	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 390,000	$ 390,000
-	47930	Sedgwick Rd Br (T-455)	Waterford Township	Local Bridge Non-TYP		$ -		$ -	FRC	$ 370,000	$ 370,000
-	906	Boyce Rd Br T-301	Conneaut Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 368,000	$ 368,000
-	1070	West Normal Street Br.	Edinboro Borough	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 367,000	$ 367,000
-	923	Leet Rd (T-857) Bridge	Harborcreek Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 365,000	$ 365,000
-	1012	Kinter Hill Rd (T-800) Br	Washington Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 329,000	$ 329,000
-	1024	Bartlett Rd Br T-640	Harborcreek Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 306,000	$ 306,000
-	85350	Oliver Road T-512 Bridge	Mckean Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 300,000	$ 300,000
-	1037	Lowe Road Br (T-555)	Amity Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 293,000	$ 293,000
-	904	Beason Rd (T-518) Brdg	Washington Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 292,000	$ 292,000
-	939	Middle Rd (T-301) Brdg	North East Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 285,000	$ 285,000

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Appendix E - Project Listing

					CURRENT		MID-RANGE		LONG RANGE		Total
					TIP +2: FFY 2017-2022		FFY: 2023-2028		FFY: 2029-2042		
SR	Project #	Project Title	Municipality	Mode	Phase	Cost	Phase	Cost	Phase	Cost	
LOCAL BRIDGES		*this project listing is unprioritized and cost estimates may be outdated									
-	848	Jackson Sta. Bridge T-619	Summit Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 280,000	$ 280,000
-	1008	Bessemer Ave (T-358) Brdg	Conneaut Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 254,000	$ 254,000
-	1021	Cherry St Ext (T-548) Br	Summit Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 254,000	$ 254,000
-	1181	Ore Docks Rd Br T-360	Conneaut Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 250,000	$ 250,000
-	837	Gage Rd (T-401) Brdg	Conneaut Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 225,000	$ 225,000
-	682	Trask Rd (T-564) Brdg	Waterford Township	Local Bridge Non-TYP		$ -		$ -	FRC	$ 223,000	$ 223,000
-	1182	Skinner Rd (T-448) Bridge	Mckean Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 204,000	$ 204,000
-	1009	Carbury Rd (T-367) Brdg	Franklin Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 202,000	$ 202,000
-	1013	Fry Road (T-448) Brdg	Washington Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 200,000	$ 200,000
-	1011	Lake View Drive Brdg	Washington Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 200,000	$ 200,000
-	838	Leacock Rd (T-409) Brdg	Washington Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 188,000	$ 188,000
-	901	Resevoir Rd (T-343) Brdg	Elk Creek Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 182,000	$ 182,000
-	881	Shady Ave ov Hare Ck	Corry City	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 180,000	$ 180,000
-	903	Mitchell Rd Br T-387	Concord Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 161,000	$ 161,000
-	79218	Baternan Ave Bridge	Erie City	Local Bridge Non-TYP		$ -		$ -	FRC	$ 155,000	$ 155,000
-	1010	Wilson Rd Br T-300	Greenfield Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 153,000	$ 153,000
-	925	Jones Rd Br T-664	Greene Township	Local Bridge Non-TYP		$ -		$ -	PFC	$ 31,000	$ 31,000
-	877	W. Law Rd (T-743) Brdg #2	North East Township	Local Bridge Non-TYP		$ -		$ -	PC	$ 30,000	$ 30,000
-	879	Cole Rd (T-751) Brdg	North East Township	Local Bridge Non-TYP		$ -		$ -	PFRC	$ 21,000	$ 21,000
-	842	Ables Rd (T-541) Brdg	Springfield Township	Local Bridge Non-TYP		$ -		$ -	PF	$ 19,000	$ 19,000
-	875	Bliley Road Br T-646	Greene Township	Local Bridge Non-TYP		$ -		$ -	PFC	$ 10,000	$ 10,000
-	71897	Pleasant St. Bridge	Union City Borough	Local Bridge Non-TYP		$ -		$ -		$ -	$ -
-	71894	Porkey Rd. Br T-330	Conneaut Township	Local Bridge Non-TYP		$ -		$ -		$ -	$ -
-	854	Schwab Dr (T-705) Brdg	Greene Township	Local Bridge Non-TYP		$ -		$ -		$ -	$ -

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Appendix E - Project Listing

					CURRENT		MID-RANGE		LONG RANGE		Total
					TIP +2: FFY 2017-2022		FFY: 2023-2028		FFY: 2029-2042		
SR	Project #	Project Title	Municipality	Mode	Phase	Cost	Phase	Cost	Phase	Cost	
TRANSIT (from EMTA)											
-	77216	Replace Fixed Route Buses	City of Erie	Transit	C	$ 1,400,000		$ -		$ -	$ 1,400,000
-	77216	Replace Fixed Route Buses	City of Erie	Transit		$ -	C	1,400,000		$ -	$ -
-	102491	Facility Improvements	City of Erie	Transit	C	$ 25,000		$ -		$ -	$ 25,000
-	102491	Facility Improvements	City of Erie	Transit		$ -	C	$ 25,000		$ -	$ 25,000
-	77128	Engines/Transmissions	City of Erie	Transit	C	$ 100,000		$ -		$ -	$ 100,000
-	77128	Engines/Transmissions	City of Erie	Transit		$ -	C	$ 100,000		$ -	$ 100,000
-	77135	Technology Upgrades	City of Erie	Transit	C	$ 25,000		$ -		$ -	$ 25,000
-	77135	Technology Upgrades	City of Erie	Transit		$ -	C	$ 25,000		$ -	$ 25,000
-	77131	Acquire Shop Equipment	City of Erie	Transit	C	$ 25,000		$ -		$ -	$ 25,000
-	77131	Acquire Shop Equipment	City of Erie	Transit		$ -	C	$ 25,000		$ -	$ 25,000
-	77132	Acquire Miscellaneous Eqpt.	City of Erie	Transit	C	$ 25,000		$ -		$ -	$ 25,000
-	77132	Acquire Miscellaneous Eqpt.	City of Erie	Transit		$ -	C	$ 25,000		$ -	$ 25,000
-	95298	Replace Non-Revenue Vehicles	City of Erie	Transit	C	$ 50,000		$ -		$ -	$ 50,000
-	102492	Shelter Amenties	City of Erie	Transit	C	$ 12,500		$ -		$ -	$ 12,500
-	102492	Shelter Amenties	City of Erie	Transit		$ -	C	$ 12,500		$ -	$ 12,500
-	77129	Replace Paratransit Buses	City of Erie	Transit	C	$ 450,000		$ -		$ -	$ 450,000
-	77129	Replace Paratransit Buses	City of Erie	Transit		$ -	C	$ 450,000		$ -	$ 450,000
-	90075	Replace Fareboxes	City of Erie	Transit	C	$ 625,000		$ -		$ -	$ 625,000

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Appendix E - Project Listing

SR	Project #	Project Title	Municipality	Mode	CURRENT TIP +2: FFY 2017-2022 Phase	CURRENT TIP +2: FFY 2017-2022 Cost	MID-RANGE FFY: 2023-2028 Phase	MID-RANGE FFY: 2023-2028 Cost	LONG RANGE FFY: 2029-2042 Phase	LONG RANGE FFY: 2029-2042 Cost	Total
AIRPORT (Corry-Lawrence Airport from PennDOT BOA)											
-	-	Seal Coat Apron	City of Corry; Concord Township	Airport	C	$ 166,667		$ -		$ -	$ 166,667
-	-	Install Generic Visual Glideslope Indicator	City of Corry; Concord Township	Airport	C	$ 166,667		$ -		$ -	$ 166,667
-	-	Rehabilitate Entrance Road 20 FYP $300,000 $16,666 $0 $0 $0 $16,667 $333,333	City of Corry; Concord Township	Airport	C	$ 333,333		$ -		$ -	$ 333,333
-	-	Install Generic Visual Glideslope Indicator	City of Corry; Concord Township	Airport	C	$ 166,667		$ -		$ -	$ 166,667
-	-	Remove Objects in RPZ's	City of Corry; Concord Township	Airport	C	$ 166,667		$ -		$ -	$ 166,667
-	-	Land Acquisition and Aerial Easements	City of Corry; Concord Township	Airport	C	$ 475,000		$ -		$ -	$ 475,000
-	-	Construct New Terminal Building	City of Corry; Concord Township	Airport	C	$ 500,000		$ -		$ -	$ 500,000
-	-	Conduct Environmental Assessment for a Runway Extension	City of Corry; Concord Township	Airport	C	$ 263,888		$ -		$ -	$ 263,888
-	-	Construct New Hangars	City of Corry; Concord Township	Airport	C	$ 1,000,000		$ -		$ -	$ 1,000,000
-	-	Rehabilitate Runway Lighting Systems, Phase I Design	City of Corry; Concord Township	Airport		$ -	C	$ 95,000		$ -	$ 95,000
-	-	Extend Runway 14-32 (acquire land)	City of Corry; Concord Township	Airport		$ -	C	$ 308,333		$ -	$ 308,333
-	-	Remove Obstructions	City of Corry; Concord Township	Airport		$ -	C	$ 211,112		$ -	$ 211,112
-	-	Rehabilitate Taxiway Lighting System, Phase I Design	City of Corry; Concord Township	Airport		$ -	C	$ 71,666		$ -	$ 71,666
-	-	Install Generic Visual Glideslope Indicators (95%)	City of Corry; Concord Township	Airport		$ -	C	$ 157,894		$ -	$ 157,894
-	-	Rehabilitate Taxiway Lighting System, Phase II Construction	City of Corry; Concord Township	Airport		$ -	C	$ 182,778		$ -	$ 182,778
-	-	Rehabilitate Runway 14-32	City of Corry; Concord Township	Airport		$ -	C	$ 1,055,556		$ -	$ 1,055,556
-	-	Rehabilitate Terminal Apron	City of Corry; Concord Township	Airport		$ -	C	$ 527,778		$ -	$ 527,778
-	-	Relocate Stewart Road/Center Street for Runway Extension Phase I Design	City of Corry; Concord Township	Airport		$ -	C	$ 158,334		$ -	$ 158,334
-	-	Rehabilitate Runway Lighting Systems, Phase II Construction	City of Corry; Concord Township	Airport		$ -	C	$ 345,000		$ -	$ 345,000
-	-	Relocate Stewart Road/Center Street for Runway Extension Phase II Construction	City of Corry; Concord Township	Airport		$ -	C	$ 633,334		$ -	$ 633,334
-	-	Extend Runway 14-32, Phase I Design	City of Corry; Concord Township	Airport		$ -	C	$ 211,112		$ -	$ 211,112
-	-	Extend Runway 14-32, Phase II Construction	City of Corry; Concord Township	Airport		$ -	C	$ 1,055,556		$ -	$ 1,055,556

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					CURRENT		MID-RANGE		LONG RANGE		Total
					TIP +2: FFY 2017-2022		FFY: 2023-2028		FFY: 2029-2042		
SR	Project #	Project Title	Municipality	Mode	Phase	Cost	Phase	Cost	Phase	Cost	
AIRPORT (From Erie International Airport)											
-	-	Acquire Liquid Material Spreader	Millcreek Township	Airport	C	$ 75,000		$ -		$ -	$ 75,000
-	-	Rehab R/W 2-20 Intersection w/ T/W A & D (Construct)	Millcreek Township	Airport	C	$ 3,465,000		$ -		$ -	$ 3,465,000
-	-	Construct Wildlife Deterrent Fence	Millcreek Township	Airport	C	$ 329,000		$ -		$ -	$ 329,000
-	-	Replace air compressor	Millcreek Township	Airport	C	$ 7,500		$ -		$ -	$ 7,500
-	-	Replace walk behind mower	Millcreek Township	Airport	C	$ 8,000		$ -		$ -	$ 8,000
-	-	Design & Construct Snow Removal Equipment Building	Millcreek Township	Airport	C	$ 1,000,000		$ -		$ -	$ 1,000,000
-	-	Rehab T/W A (Design Phase 2 Final)	Millcreek Township	Airport	C	$ 901,000		$ -		$ -	$ 901,000
-	-	Replace terminal building roof	Millcreek Township	Airport	C	$ 500,000		$ -		$ -	$ 500,000
-	-	Replace terminal building HVAC	Millcreek Township	Airport	C	$ 250,000		$ -		$ -	$ 250,000
-	-	Replace two forklifts	Millcreek Township	Airport	C	$ 40,000		$ -		$ -	$ 40,000
-	-	Rehabilitate Taxiway A (Construction)	Millcreek Township	Airport	C	$ 2,870,000		$ -		$ -	$ 2,870,000
-	-	Acquire skid steer with attachments	Millcreek Township	Airport	C	$ 120,000		$ -		$ -	$ 120,000
-	-	Replace 5 heating units car wash garage bays	Millcreek Township	Airport	C	$ 25,000		$ -		$ -	$ 25,000
-	-	Rehab Maintenance Building Ramp	Millcreek Township	Airport	C	$ 100,000		$ -		$ -	$ 100,000
-	-	Rehabilitate Taxiway A (Construction)	Millcreek Township	Airport	C	$ 2,870,000		$ -		$ -	$ 2,870,000
-	-	Replace street sweeper	Millcreek Township	Airport	C	$ 70,000		$ -		$ -	$ 70,000
-	-	Replace utility tractor	Millcreek Township	Airport	C	$ 100,000		$ -		$ -	$ 100,000
-	-	Acquire (replace) fingerprint machine	Millcreek Township	Airport	C	$ 25,000		$ -		$ -	$ 25,000
-	-	Rehabilitate Ramp (Apron)Pavement Project	Millcreek Township	Airport	C	$ 80,000		$ -		$ -	$ 80,000
-	-	Acquire Incident Reporting Software	Millcreek Township	Airport	C	$ 15,000		$ -		$ -	$ 15,000
-	-	Rehabilitate (renovate) Communications Center	Millcreek Township	Airport	C	$ 40,000		$ -		$ -	$ 40,000
-	-	Acquire Backhoe	Millcreek Township	Airport	C	$ 100,000		$ -		$ -	$ 100,000
-	-	Acquire (replace) snow plow trucks landside	Millcreek Township	Airport	C	$ 120,000		$ -		$ -	$ 120,000
-	-	Glycol Control System Upgrade	Millcreek Township	Airport	C	$ 40,000		$ -		$ -	$ 40,000
-	-	Replace ticketing conveyor belts (3)	Millcreek Township	Airport	C	$ 25,000		$ -		$ -	$ 25,000
-	-	Renovate PSO office	Millcreek Township	Airport	C	$ 100,000		$ -		$ -	$ 100,000
-	-	Replace ARFF turnout gear	Millcreek Township	Airport	C	$ 15,000		$ -		$ -	$ 15,000
-	-	Acquire SRE (2 Snow Blowers) (Replacement)	Millcreek Township	Airport	C	$ 1,600,000		$ -		$ -	$ 1,600,000
-	-	Rehabilitate Taxiway A (Construction)	Millcreek Township	Airport	C	$ 2,870,000		$ -		$ -	$ 2,870,000
-	-	Replace Airline Passenger Lift Device	Millcreek Township	Airport	C	$ 150,000		$ -		$ -	$ 150,000
-	-	Obstruction Removal	Millcreek Township	Airport	C	$ 100,000		$ -		$ -	$ 100,000
-	-	Replace front loader	Millcreek Township	Airport	C	$ 180,000		$ -		$ -	$ 180,000
-	-	Rehabilitate (replace) Access Control System	Millcreek Township	Airport	C	$ 250,000		$ -		$ -	$ 250,000
-	-	Acquire (replace)Fire alarm/emergency notification system	Millcreek Township	Airport	C	$ 350,000		$ -		$ -	$ 350,000
-	-	Upgrade Screening checkpoint	Millcreek Township	Airport	C	$ 100,000		$ -		$ -	$ 100,000
-	-	Boarding area emergency exit doors	Millcreek Township	Airport	C	$ 75,000		$ -		$ -	$ 75,000
-	-	Acquire AOA perimeter cameras	Millcreek Township	Airport	C	$ 100,000		$ -		$ -	$ 100,000
-	-	Replace 4 revolving doors terminal building	Millcreek Township	Airport	C	$ 400,000		$ -		$ -	$ 400,000
-	-	Replace terminal building flooring	Millcreek Township	Airport	C	$ 150,000		$ -		$ -	$ 150,000

S = Study, P = Preliminary Engineering, F = Final Engineering, R = Right-of-Way, U = Utilities, C = Construction

Appendix E - Project Listing

SR	Project #	Project Title	Municipality	Mode	CURRENT TIP +2: FFY 2017-2022 Phase	CURRENT TIP +2: FFY 2017-2022 Cost	MID-RANGE FFY: 2023-2028 Phase	MID-RANGE FFY: 2023-2028 Cost	LONG RANGE FFY: 2029-2042 Phase	LONG RANGE FFY: 2029-2042 Cost	Total
AIRPORT (From Erie International Airport)											
-	-	Replace phone system	Millcreek Township	Airport	C	$ 50,000		$ -		$ -	$ 50,000
-	-	Replace Airfield snow plows	Millcreek Township	Airport	C	$ 1,000,000		$ -		$ -	$ 1,000,000
-	-	Replace crack sealer	Millcreek Township	Airport	C	$ 17,000		$ -		$ -	$ 17,000
-	-	Replace ARFF truck	Millcreek Township	Airport	C	$ 1,400,000		$ -		$ -	$ 1,400,000
-	-	Replace SRE (Trackless)	Millcreek Township	Airport		$ -	C	$ 175,000		$ -	$ 175,000
-	-	Replace billy goat brush cutter	Millcreek Township	Airport		$ -	C	$ 2,500		$ -	$ 2,500
-	-	Replace airfield 1t dump truck	Millcreek Township	Airport		$ -	C	$ 35,000		$ -	$ 35,000
-	-	Replace CCTVs	Millcreek Township	Airport		$ -	C	$ 150,000		$ -	$ 150,000
-	-	Acquire SIDA/Drivers training program	Millcreek Township	Airport		$ -	C	$ 130,000		$ -	$ 130,000
-	-	Replace terminal building seating	Millcreek Township	Airport		$ -	C	$ 200,000		$ -	$ 200,000
-	-	Replace LEO vehicles	Millcreek Township	Airport		$ -	C	$ 130,000		$ -	$ 130,000
-	-	Replace bucket truck	Millcreek Township	Airport		$ -	C	$ 175,000		$ -	$ 175,000
-	-	Replace airfield lighted x's	Millcreek Township	Airport		$ -	C	$ 88,000		$ -	$ 88,000
-	-	Replace incident command vehicle	Millcreek Township	Airport		$ -	C	$ 50,000		$ -	$ 50,000
-	-	Replace utility truck	Millcreek Township	Airport		$ -	C	$ 35,000		$ -	$ 35,000
-	-	Replace tank mower	Millcreek Township	Airport		$ -	C	$ 10,000		$ -	$ 10,000
-	-	Replace utility vehicle UT1	Millcreek Township	Airport		$ -	C	$ 21,000		$ -	$ 21,000
-	-	Replace mower/broom/blower	Millcreek Township	Airport		$ -	C	$ 43,000		$ -	$ 43,000
-	-	Replace tractor with mowing deck	Millcreek Township	Airport		$ -	C	$ 88,000		$ -	$ 88,000
-	-	Fuel farm hardening	Millcreek Township	Airport		$ -	C	$ 50,000		$ -	$ 50,000
-	-	Radio system upgrade	Millcreek Township	Airport		$ -	C	$ 300,000		$ -	$ 300,000
-	-	Update terminal building lights - led	Millcreek Township	Airport		$ -	C	$ 150,000		$ -	$ 150,000
-	-	Terminal building exterior lighting replacement - led	Millcreek Township	Airport		$ -	C	$ 250,000		$ -	$ 250,000
-	-	Replace 2500 plow	Millcreek Township	Airport		$ -	C	$ 42,000		$ -	$ 42,000
-	-	Replace 3500 utility truck	Millcreek Township	Airport		$ -	C	$ 48,000		$ -	$ 48,000
-	-	Replace 3500 dump truck	Millcreek Township	Airport		$ -	C	$ 62,000		$ -	$ 62,000
-	-	Replace 2500 plow	Millcreek Township	Airport		$ -	C	$ 34,000		$ -	$ 34,000
-	-	Replace paint truck	Millcreek Township	Airport		$ -	C	$ 130,000		$ -	$ 130,000
-	-	Replace multi-function SRE	Millcreek Township	Airport		$ -	C	$ 650,000		$ -	$ 650,000
-	-	Replace line laser paint machine	Millcreek Township	Airport		$ -	C	$ 20,000		$ -	$ 20,000
-	-	Replace multi-function SRE	Millcreek Township	Airport		$ -	C	$ 650,000		$ -	$ 650,000
-	-	Replace Perimeter fence (north)	Millcreek Township	Airport		$ -		$ -	C	$ 750,000	$ 750,000
-	-	Replace baggage conveyor belt	Millcreek Township	Airport		$ -		$ -	C	$ 300,000	$ 300,000
-	-	Replace structural fire truck	Millcreek Township	Airport		$ -		$ -	C	$ 100,000	$ 100,000

S = Study, P = Preliminary Engineering, F = Final Engineering, R = Right-of-Way, U = Utilities, C = Construction

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Appendix F
Agency Coordination

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Erie Area Transportation Study (EATS) MPO
Long Range Transportation Plan Update

Agency Coordination Meeting

Project Team

Erie County Planning	Kathy Wyrosdick
Erie County Planning	Christopher Friday
PennDOT Central Office	Dan Keane
PennDOT District 1-0	Brian McNulty
PennDOT District 1-0	Lyndsie DeVito
WRA	Ashley Tracy
WRA	Scott Thompson-Graves

January 25, 2017

Agenda

- LRTP description
- Public Involvement
- Location
- Existing & future land use
- Major roadway network & condition
- Protected lands and community resources
- Environmental layers
- TIP impacts
- LRTP impacts
- Mitigation strategies

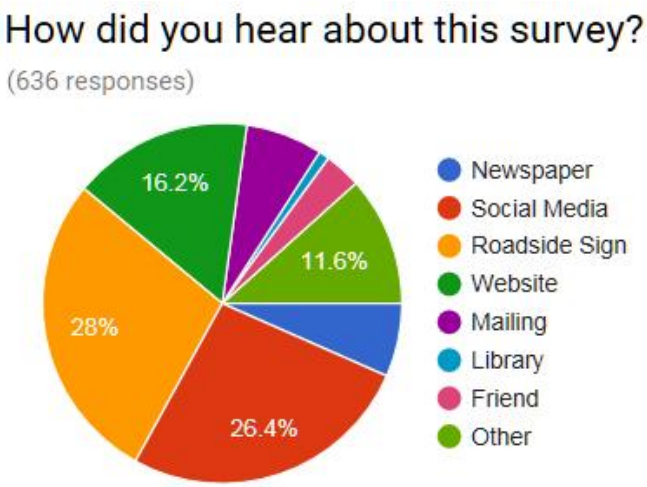
LRTP Description

Erie County EATS MPO LRTP 2017

- Update to 2012 LRTP
- Listening tour to engage stakeholders and municipalities
- Development of documentation and project listing, prioritization through Decision Lens process
- Fiscally constrained
- Addresses 10 planning factors, including two new introduced under the FAST Act (reliability & stormwater and tourism)

Federal Planning Factors
System preservation
System management
Safety
Security
Personal and freight mobility
Mode interconnectivity
Economic Vitality
Environment
Reliability and stormwater
Tourism

Public Involvement

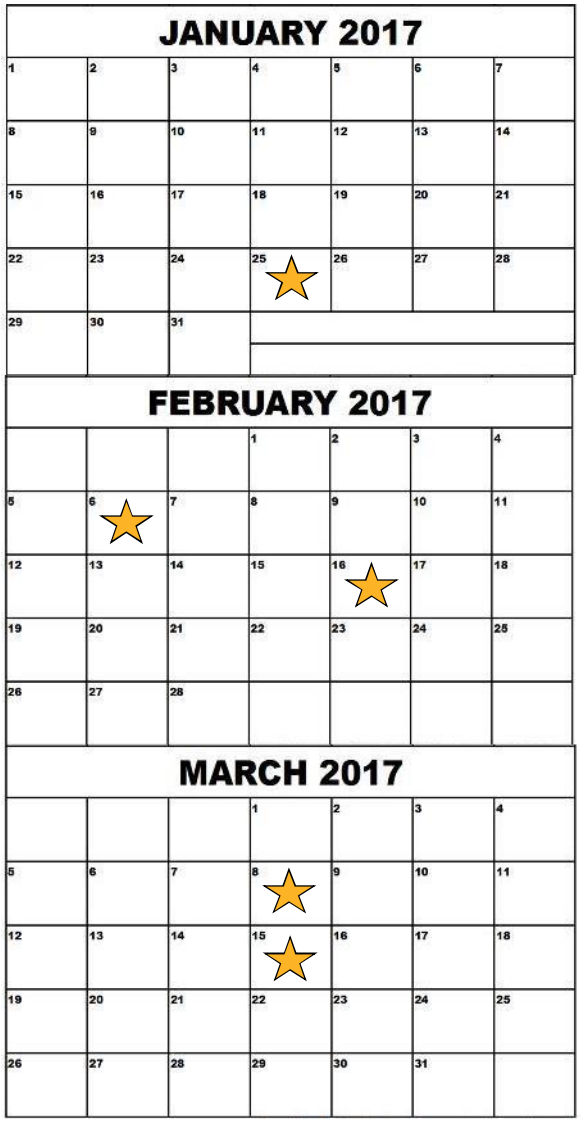


Public Involvement

Local Goals & Focus Areas

- Economic Vitality
- Transportation Safety & Security
- People & Freight Accessibility and Mobility
- Sustainability
- Project Feasibility
- Congestion and Maintenance

Public Involvement



January 25th - Agency Coordination Meeting

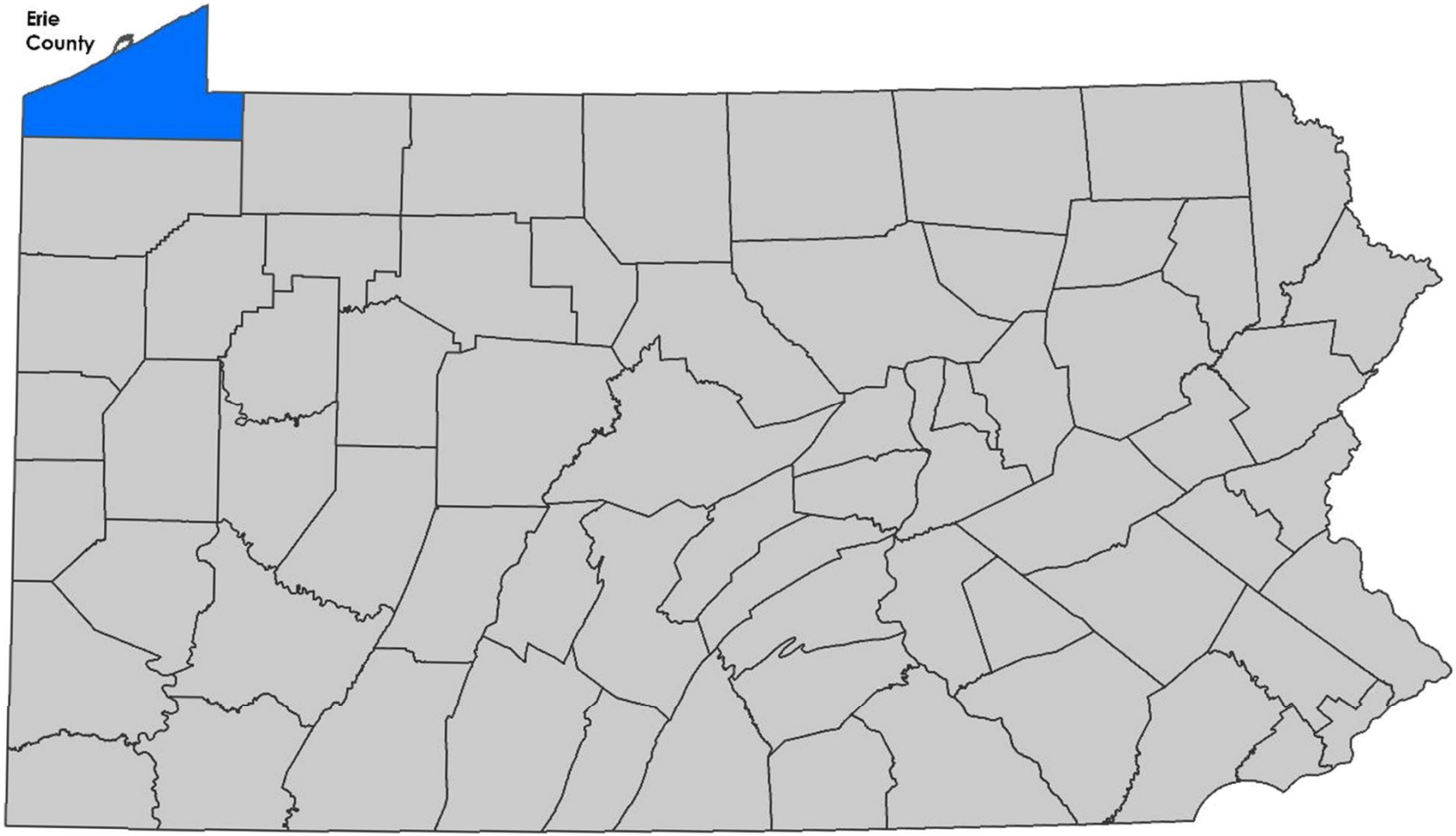
February 6th - Begin 30-day Public Comment Period (tentative)

February 16th - Public Meeting (tentative)

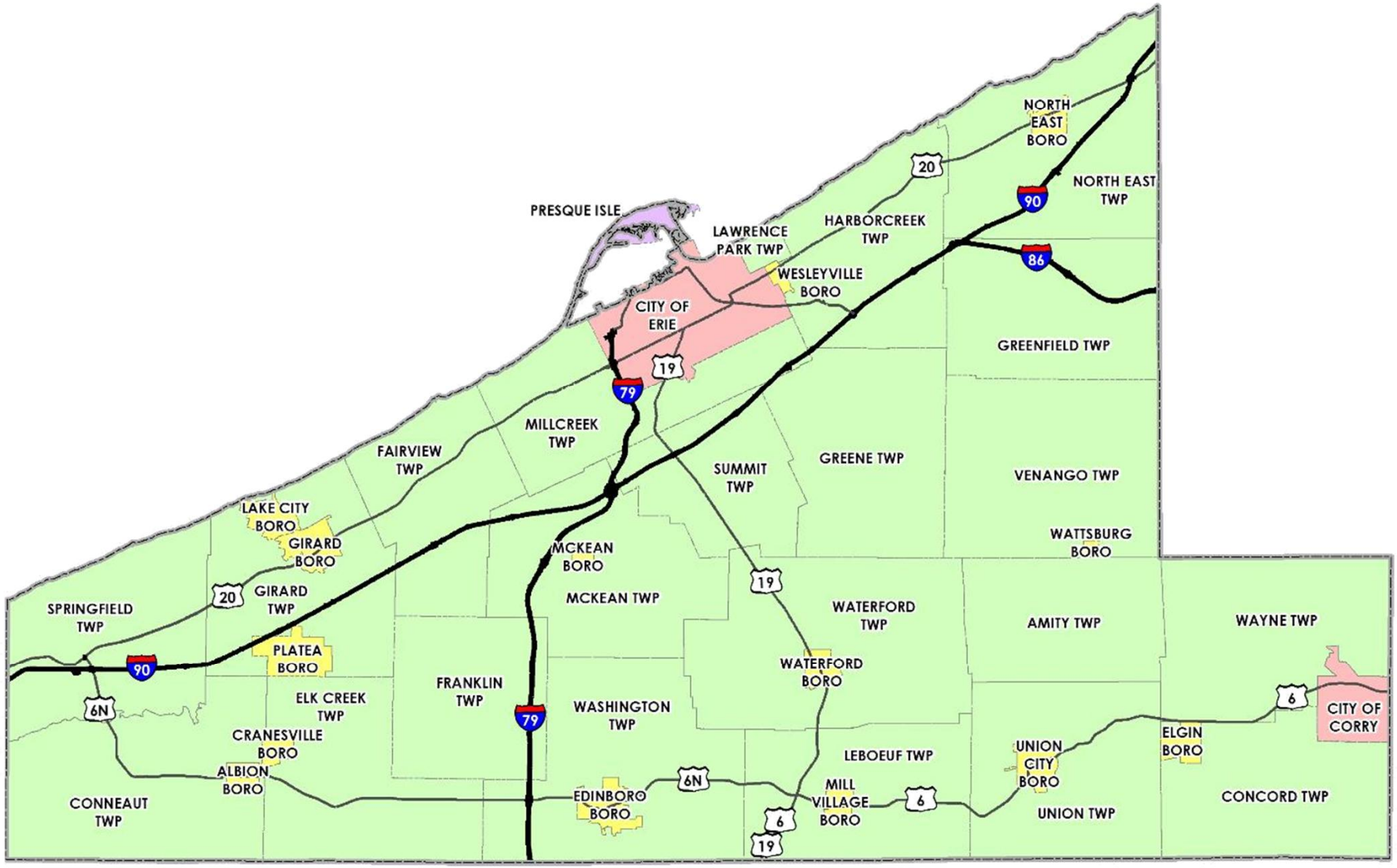
March 8th - End Public Comment Period (tentative)

March 15th – EATS MPO Adopts LRTP

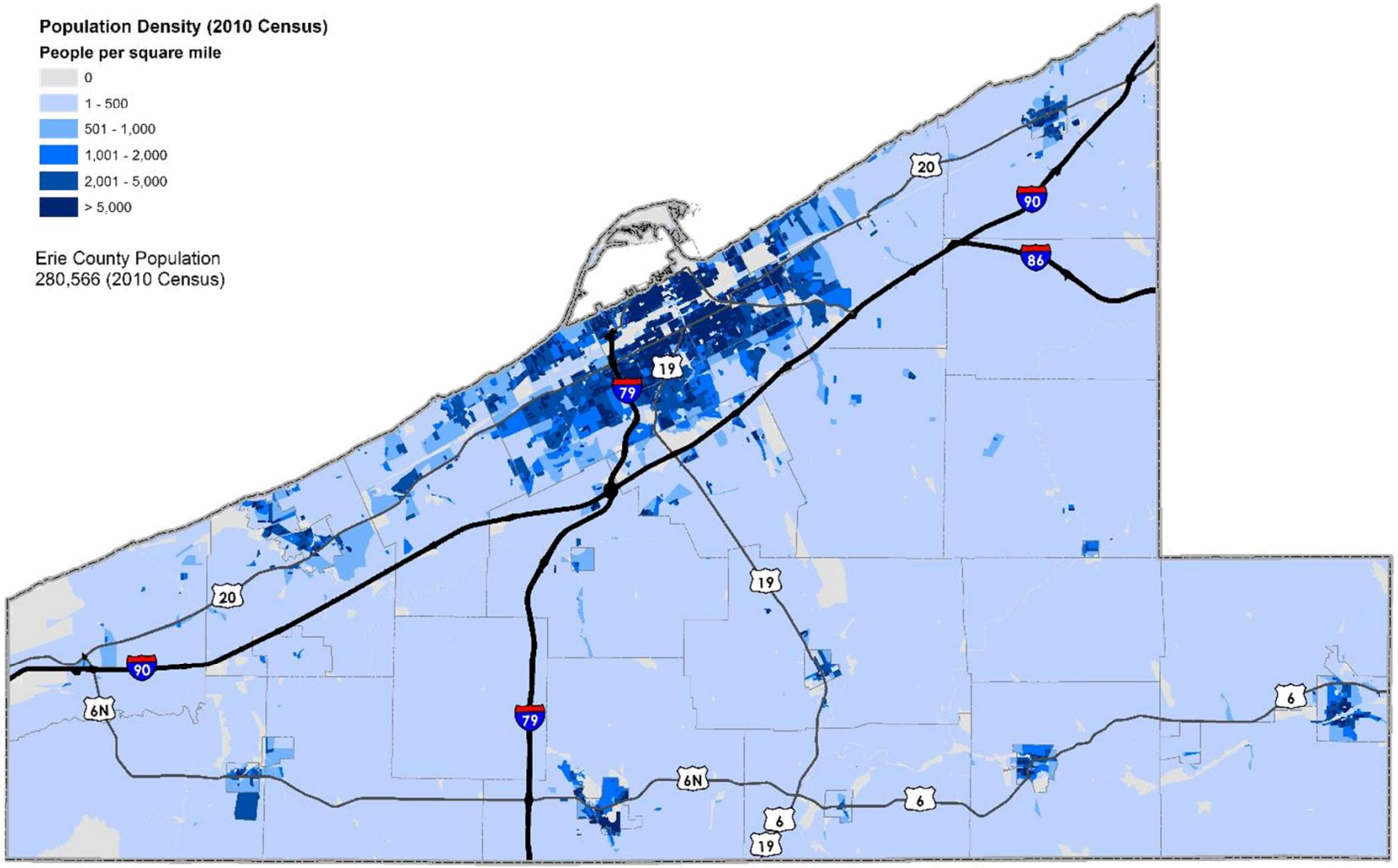
Location – Erie County



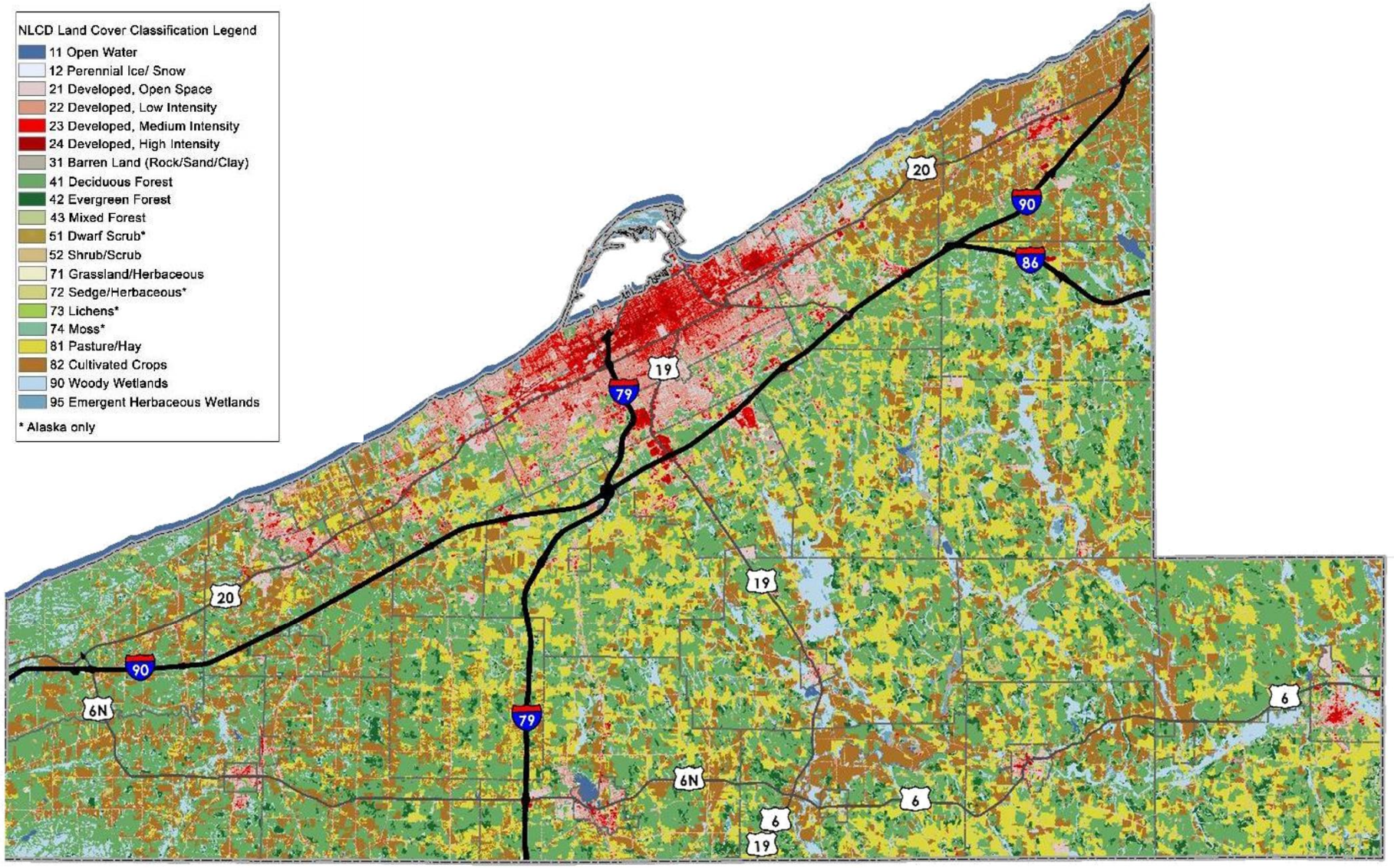
Location - Municipalities



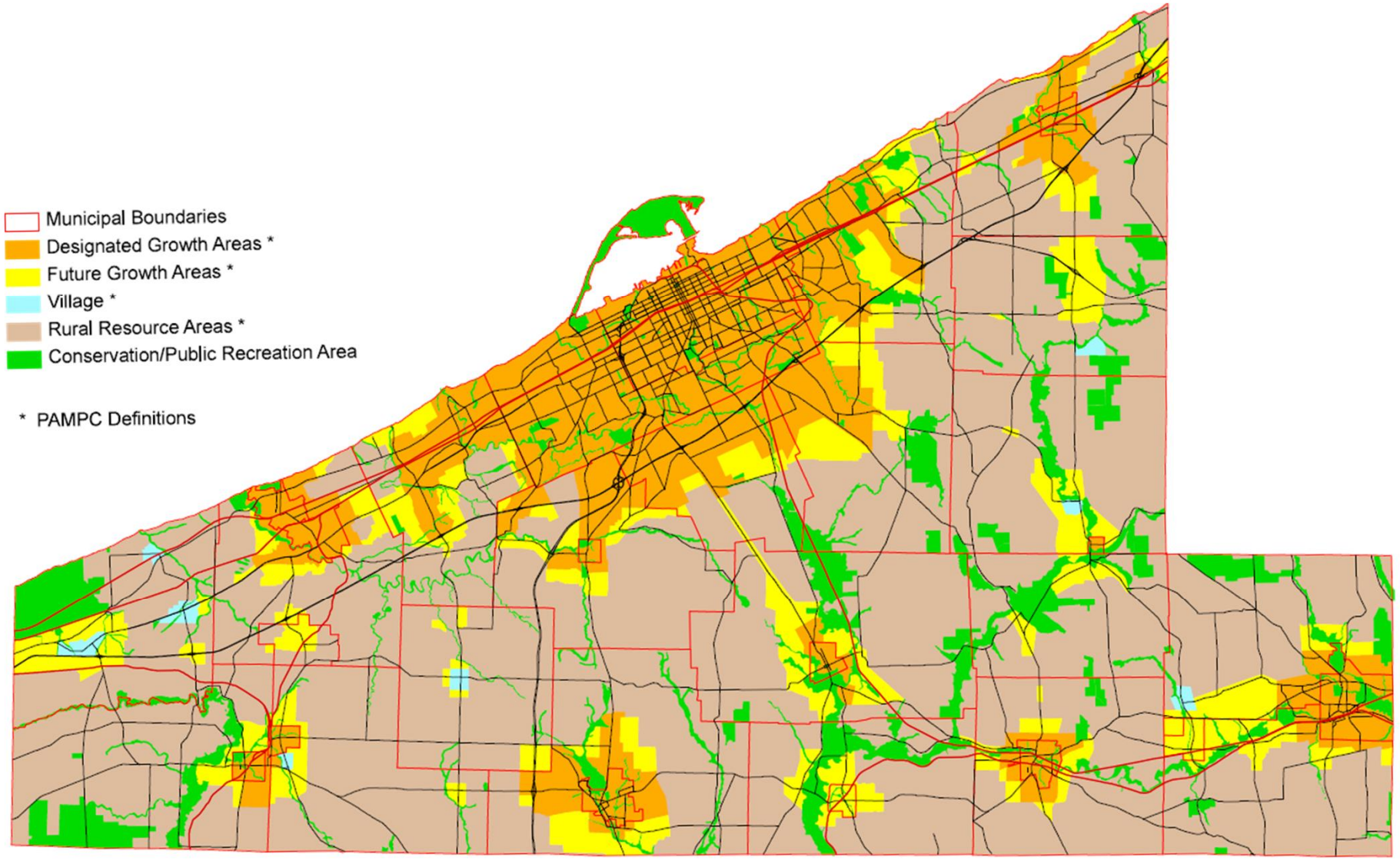
Population Density



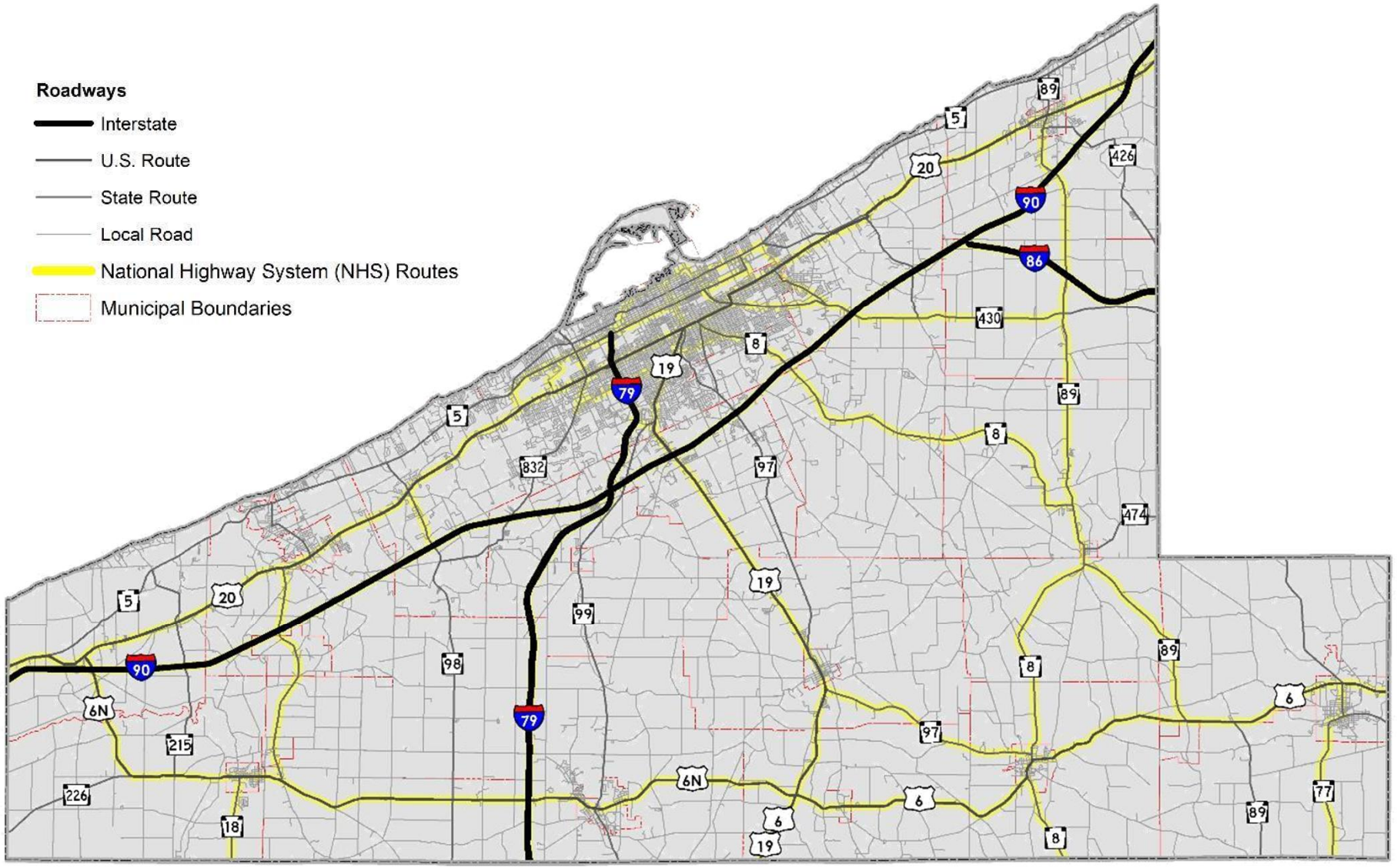
Land Use Existing



Land Use Future



Major Roadway Network



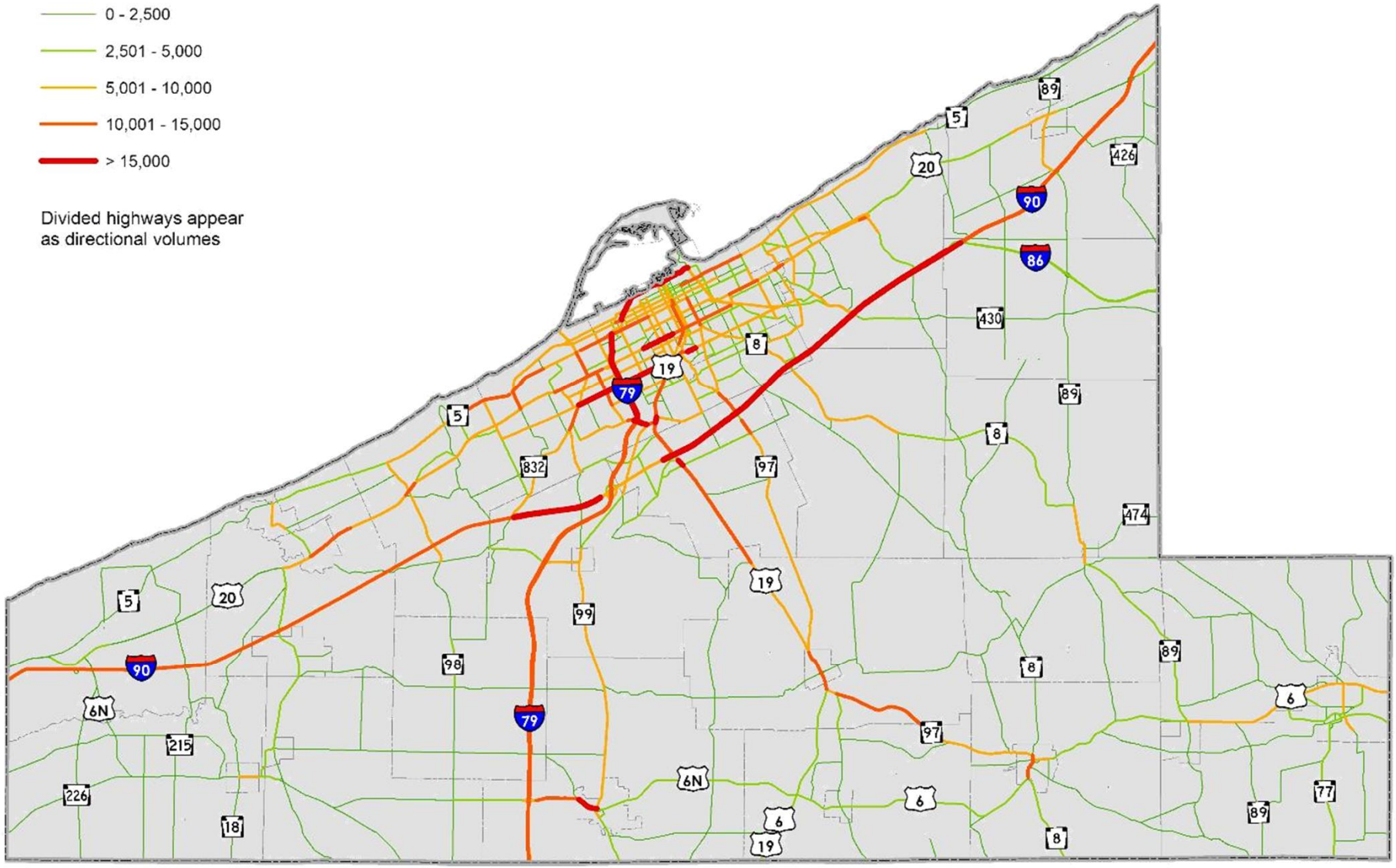
Kathy Wyrosdick, Erie County Planning | Dan Keane, PennDOT Central Office | Ashley Tracy, WRA

ADT

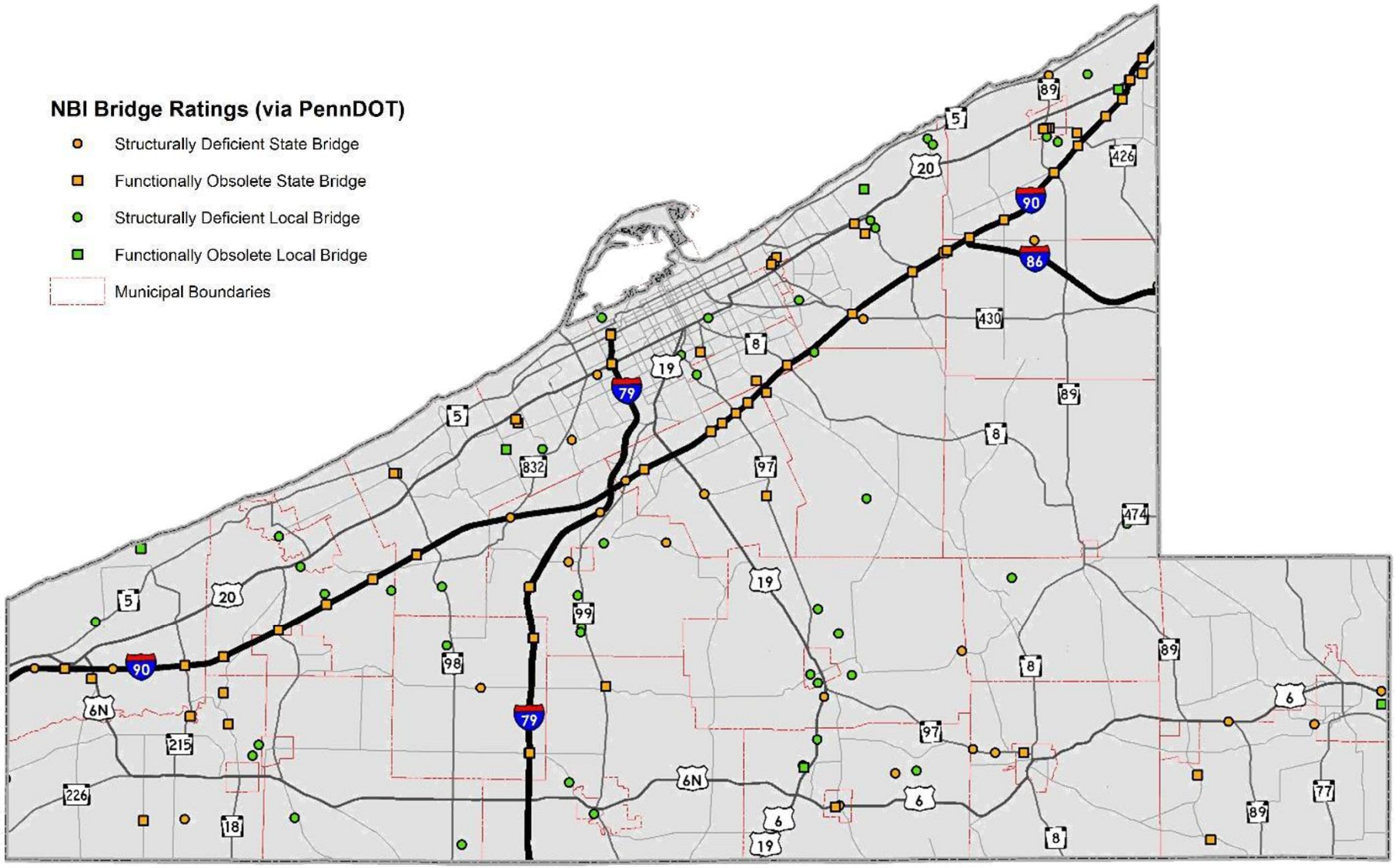
Average Annual Daily Traffic (Vehicles per day)

- 0 - 2,500
- 2,501 - 5,000
- 5,001 - 10,000
- 10,001 - 15,000
- > 15,000

Divided highways appear as directional volumes



FO/SD Bridges



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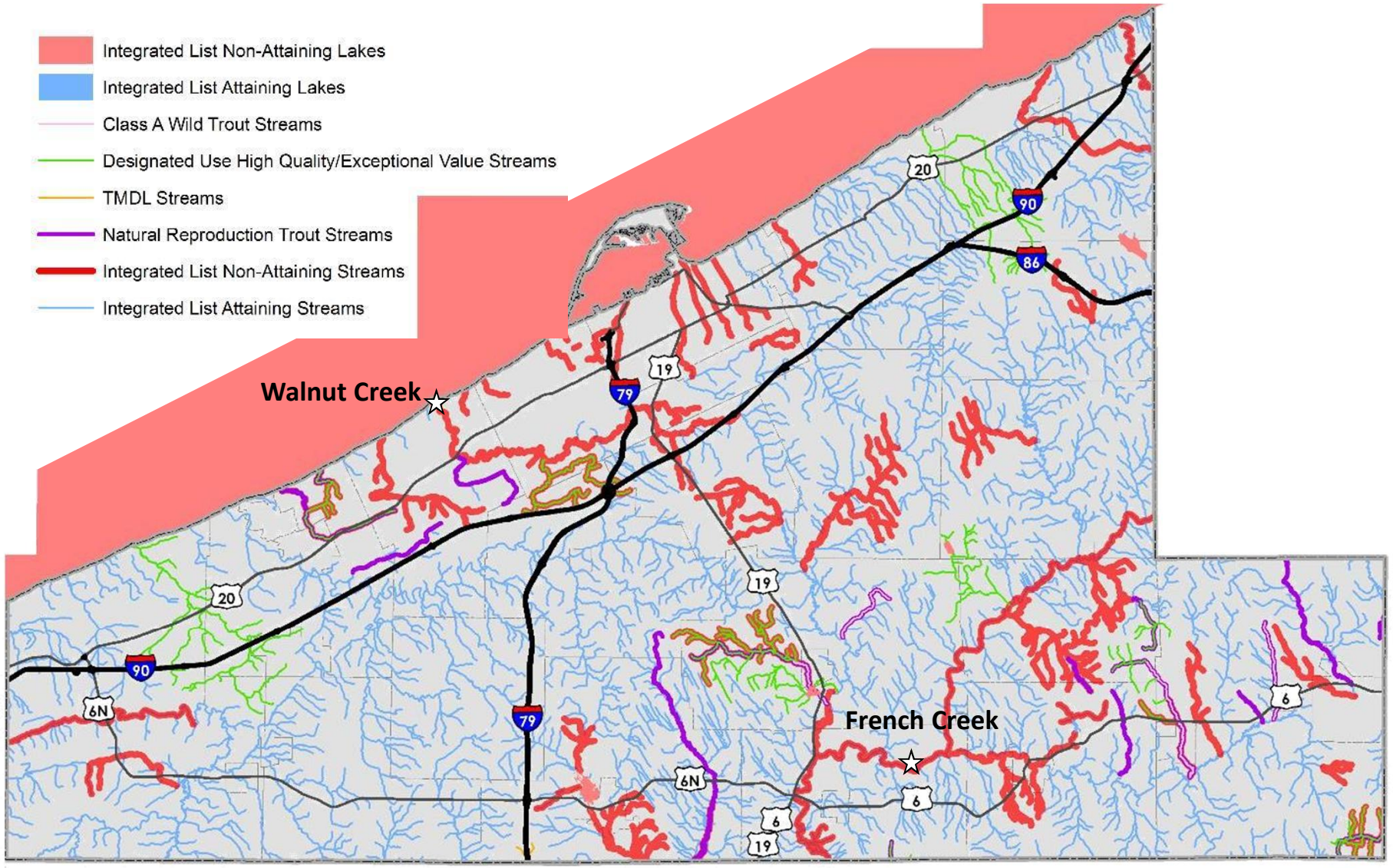
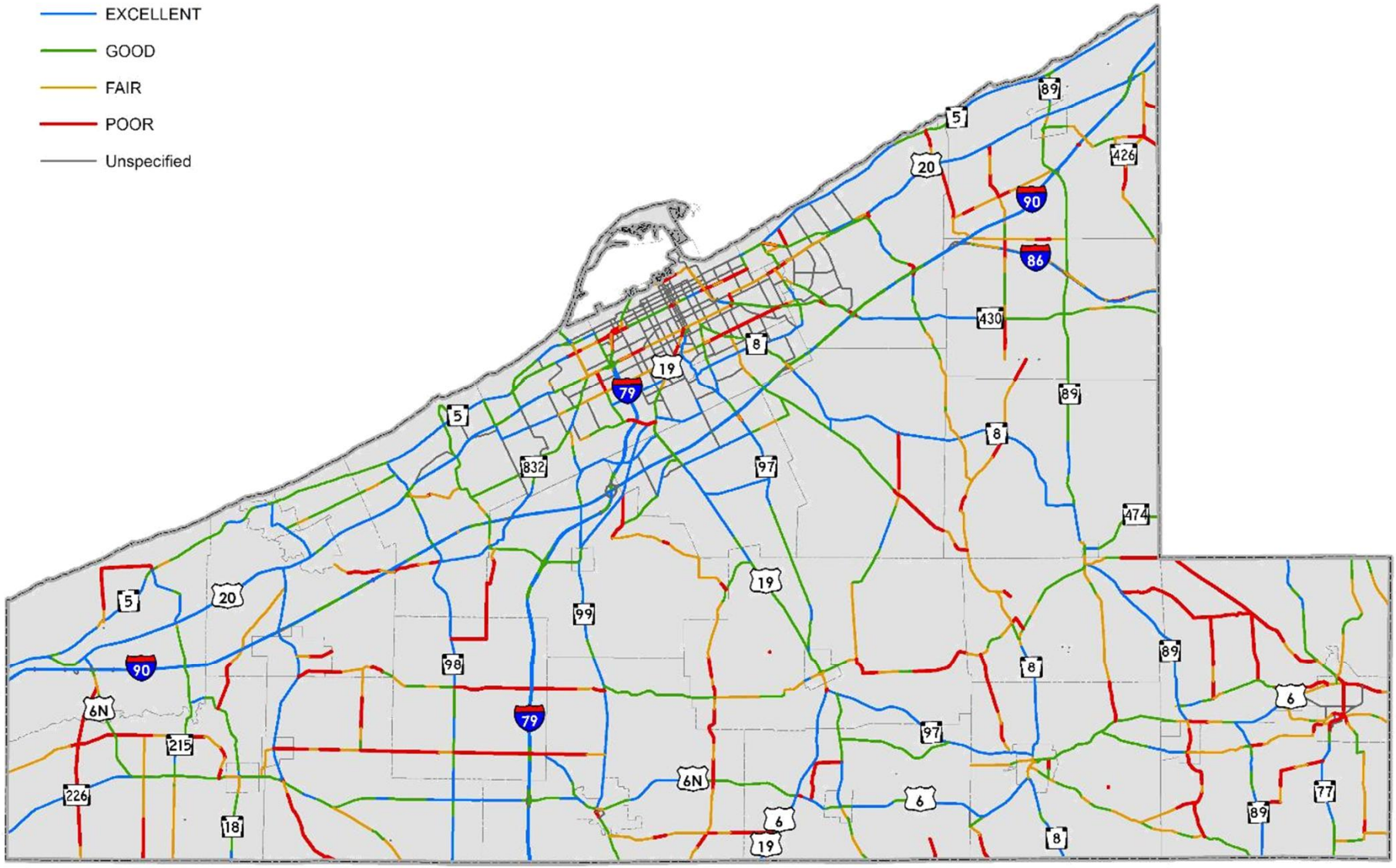
Surface Waters



IRI Pavement Condition



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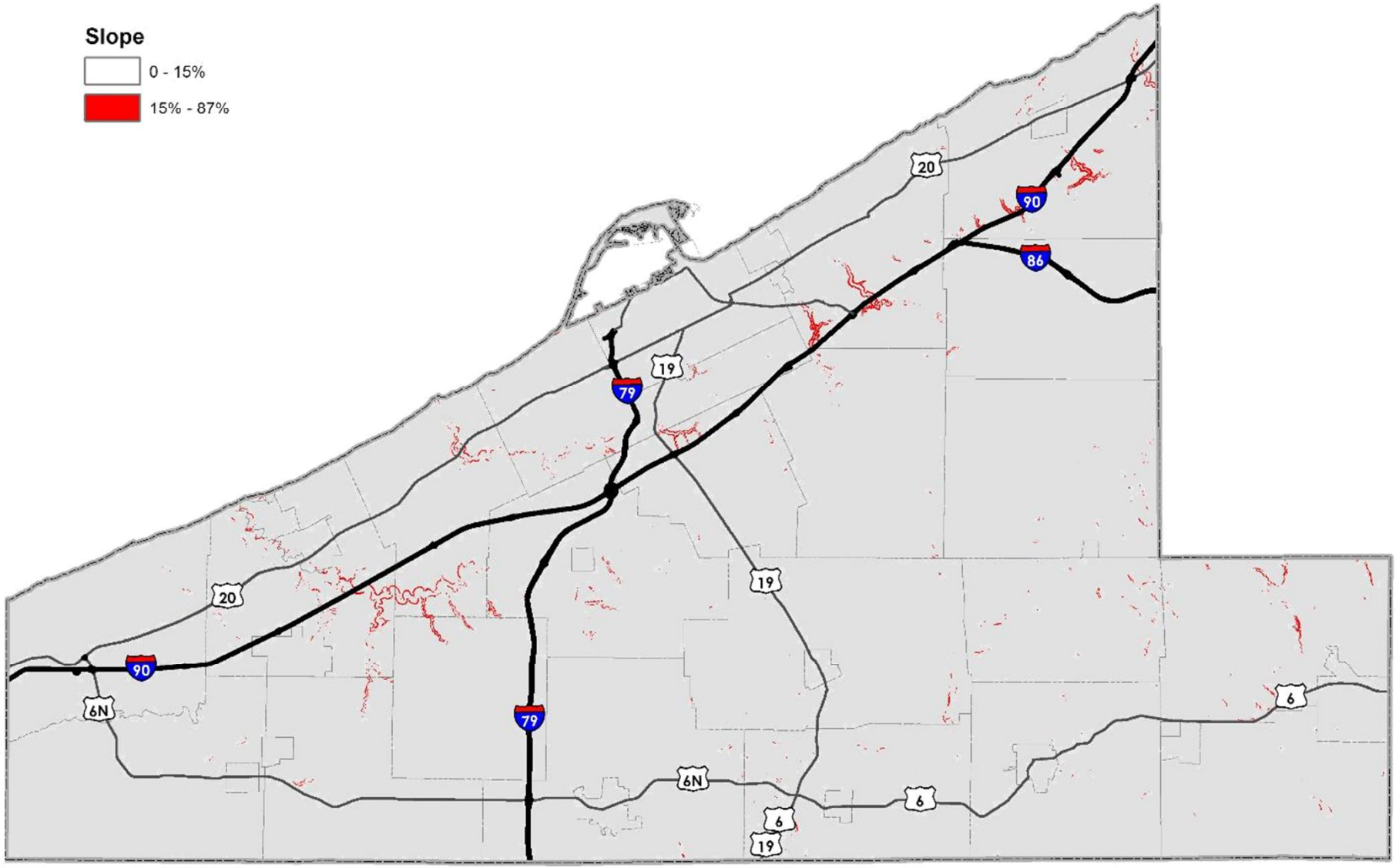
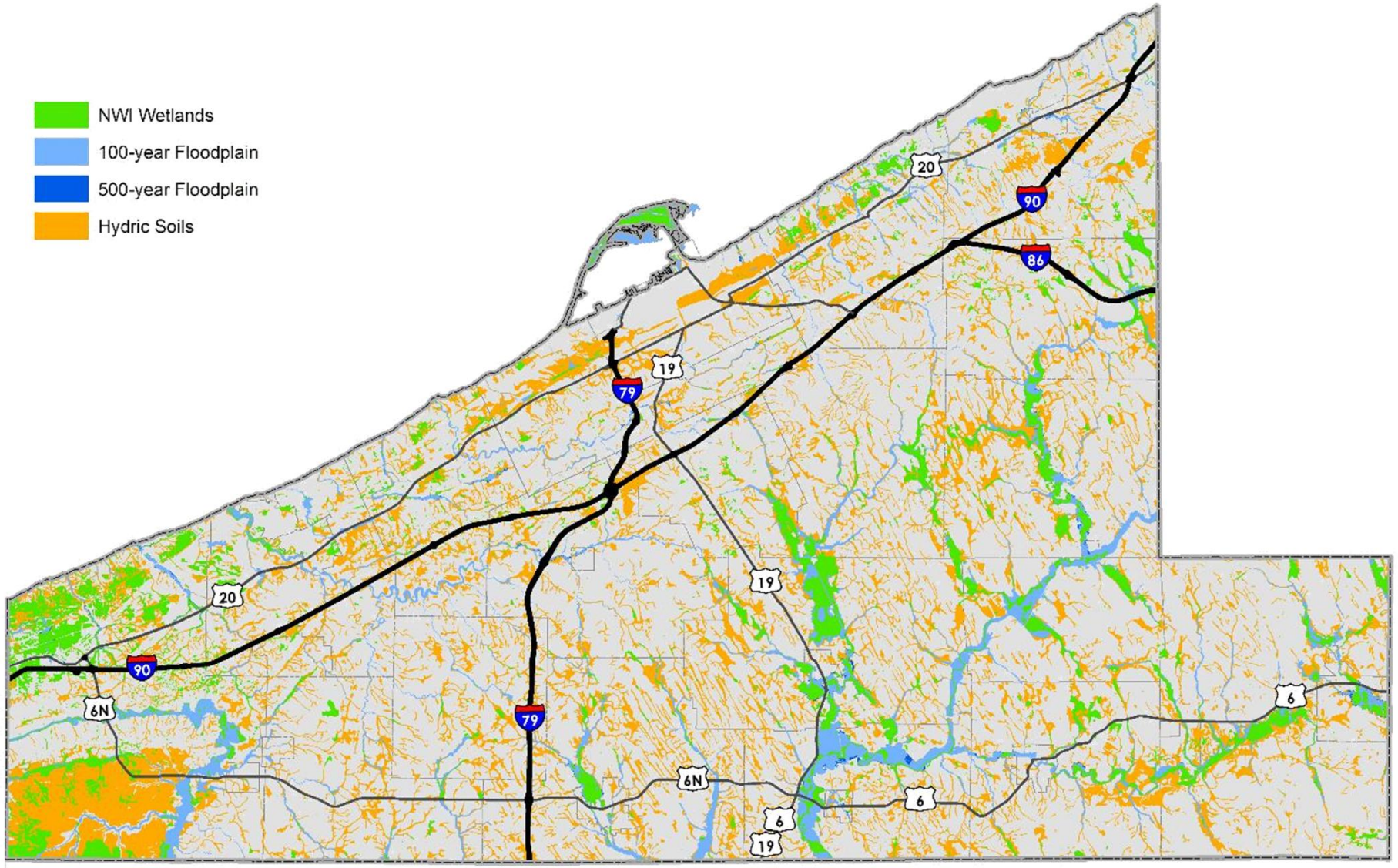
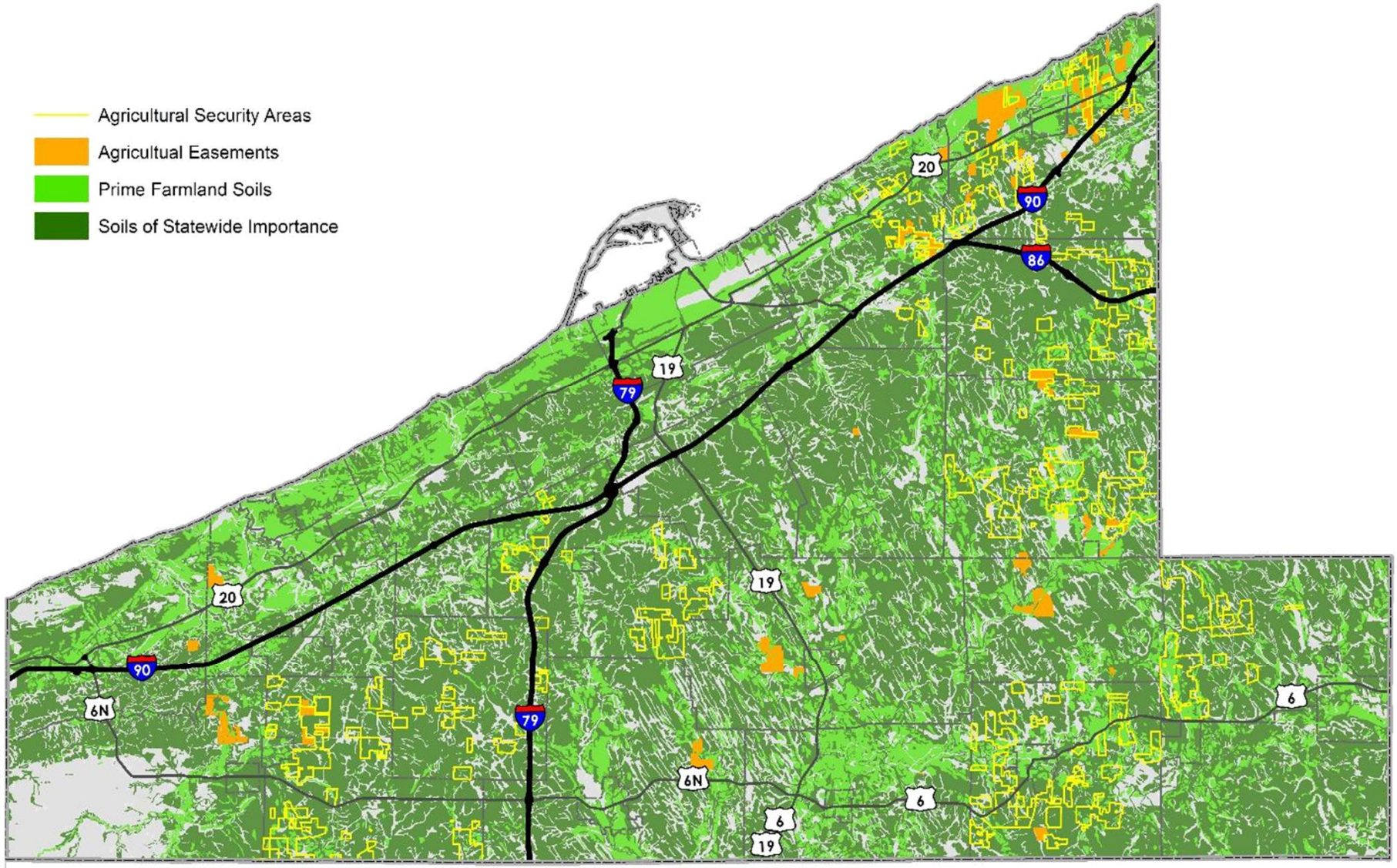
Steep Slopes



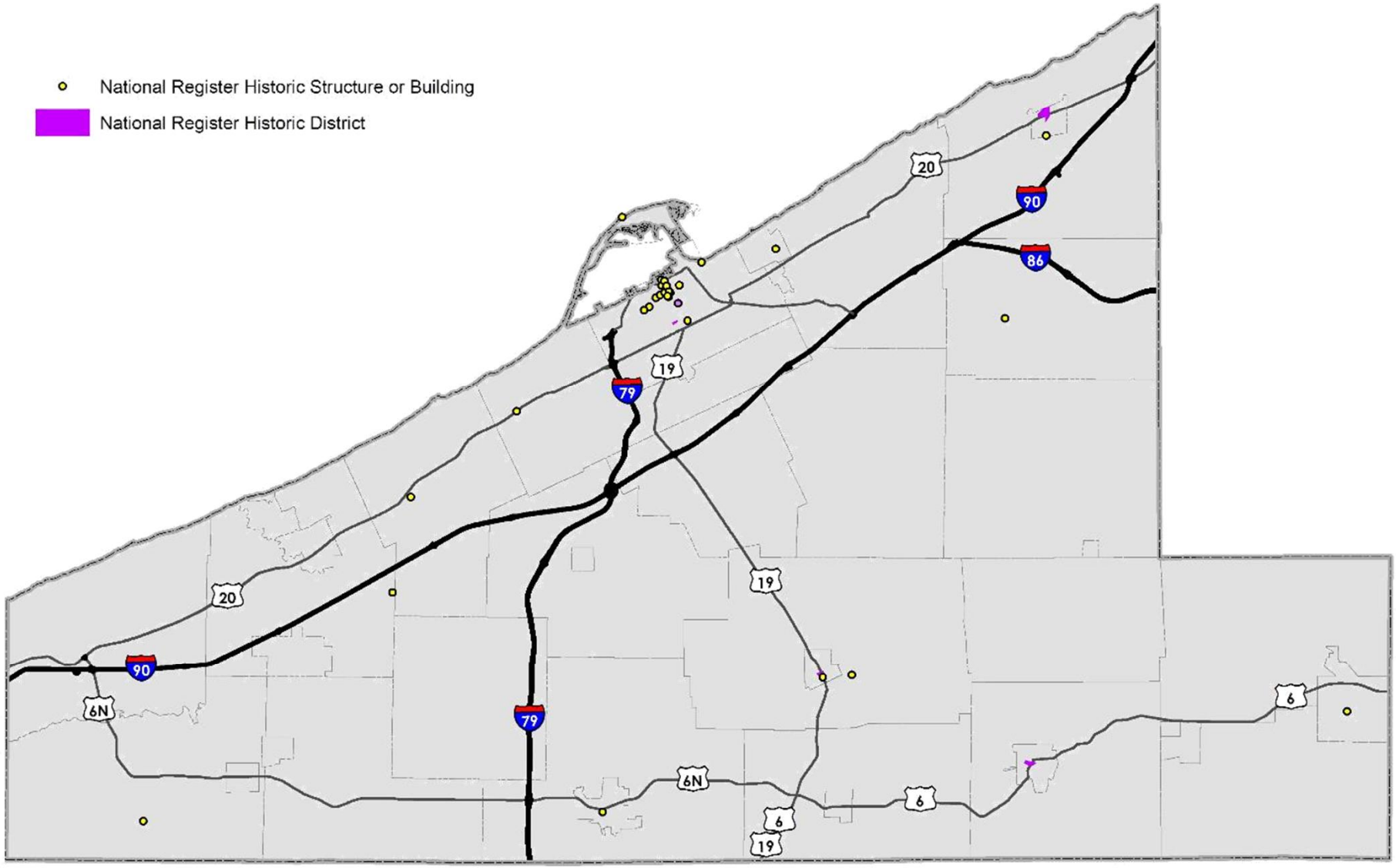
Wetlands / Floodplains



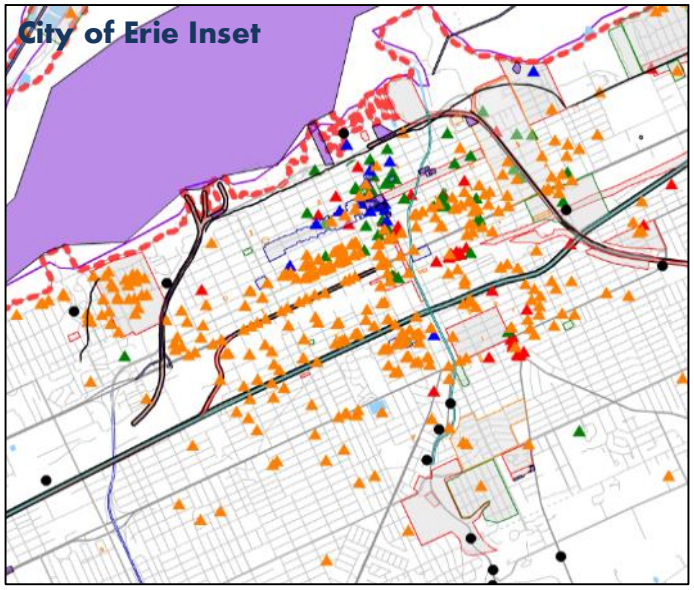
Farmland and Agriculture

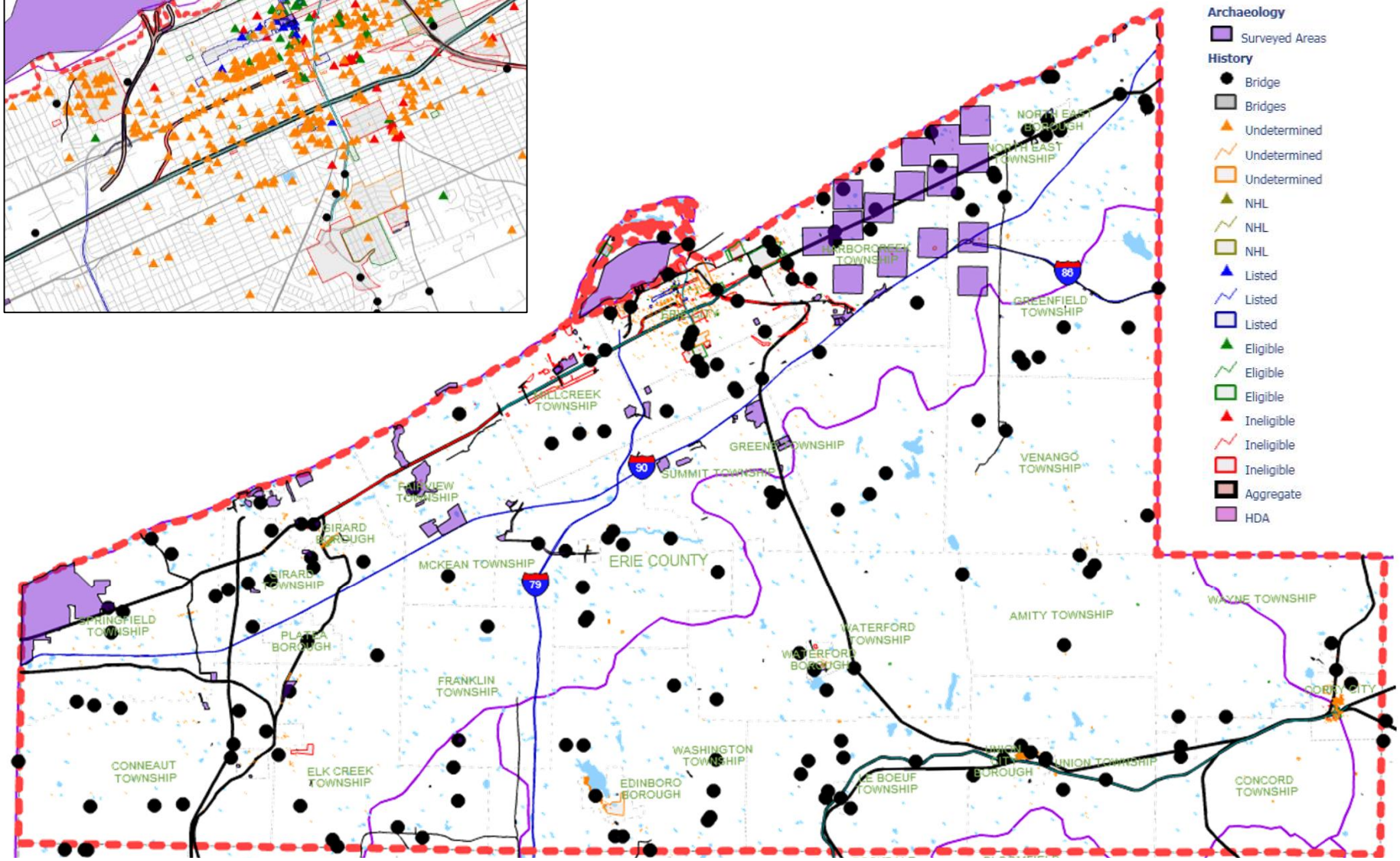


Historic Features

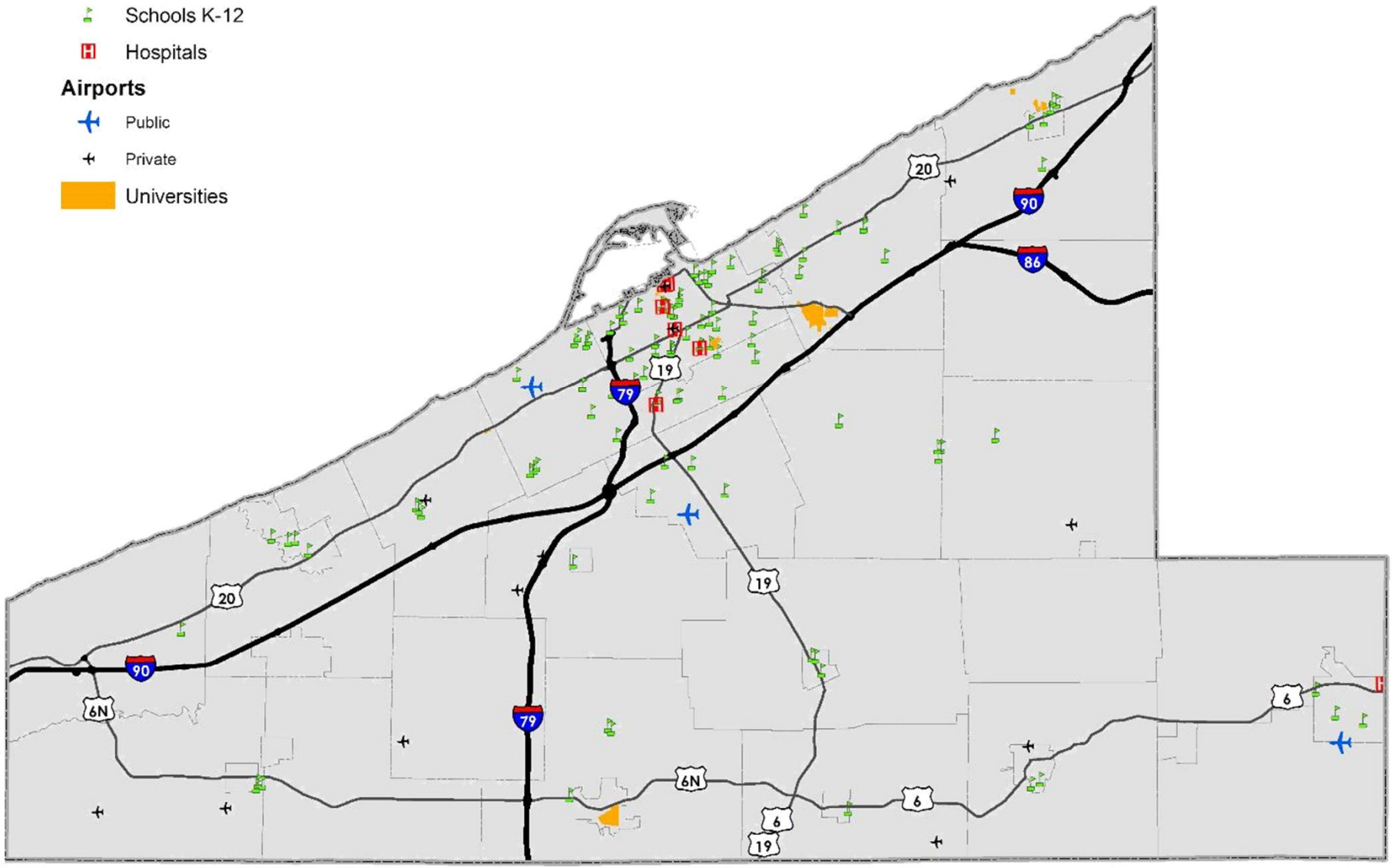


Historic / Archeology

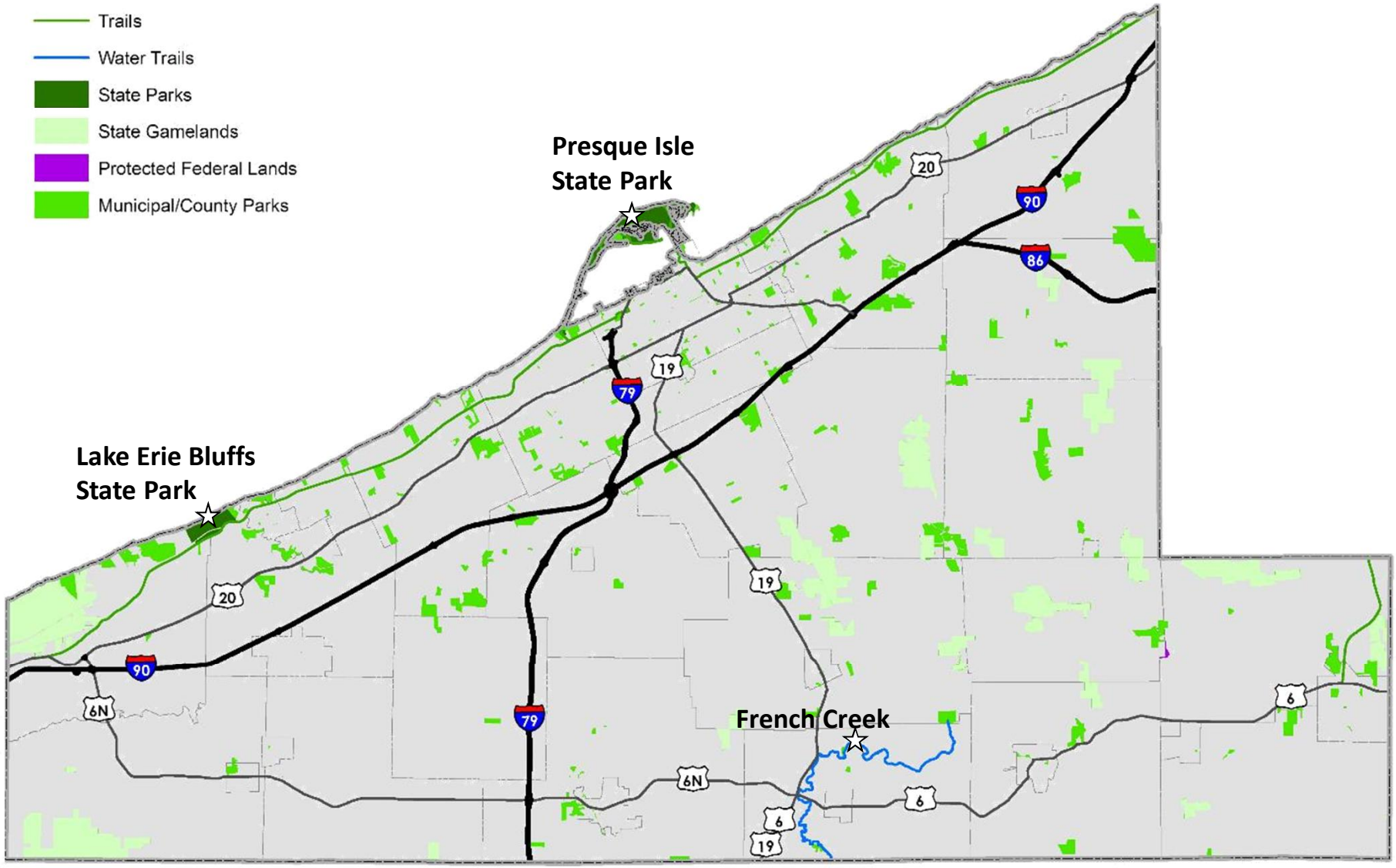




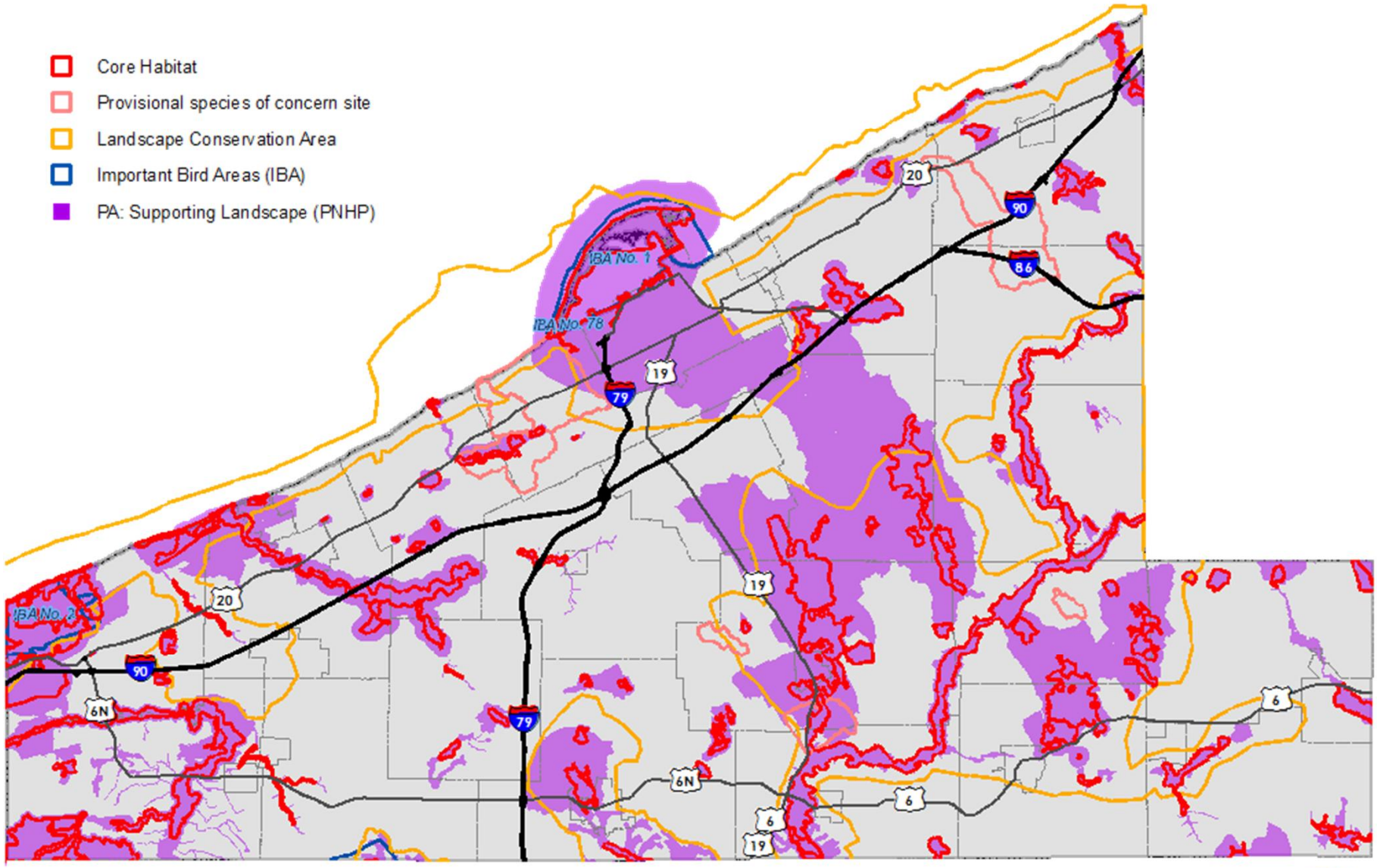
Community Resources



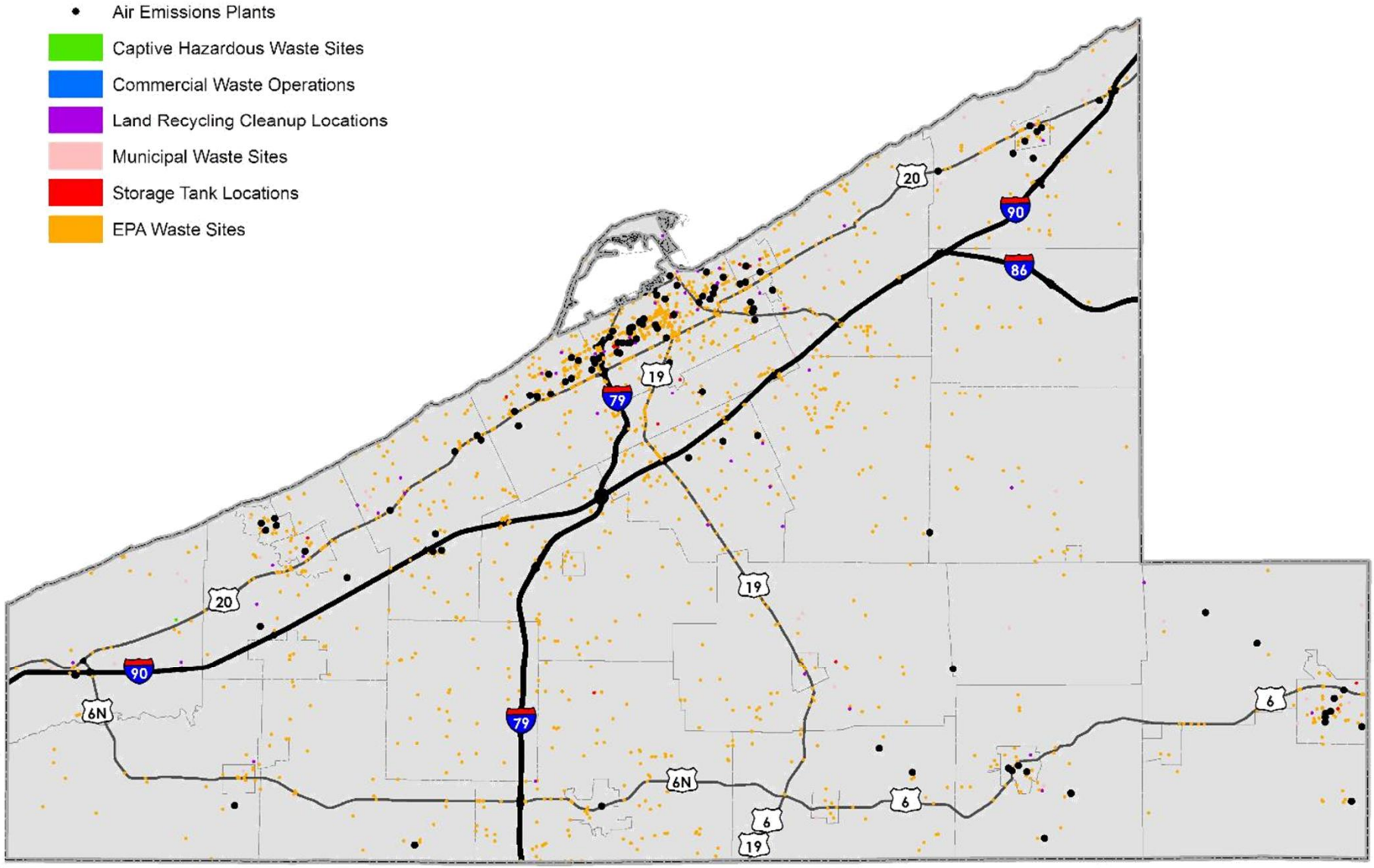
Protected Lands



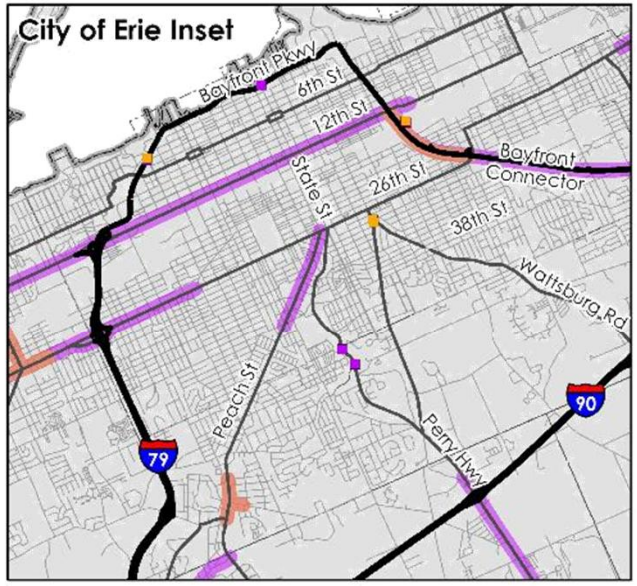
Natural Heritage Inventory Landscapes

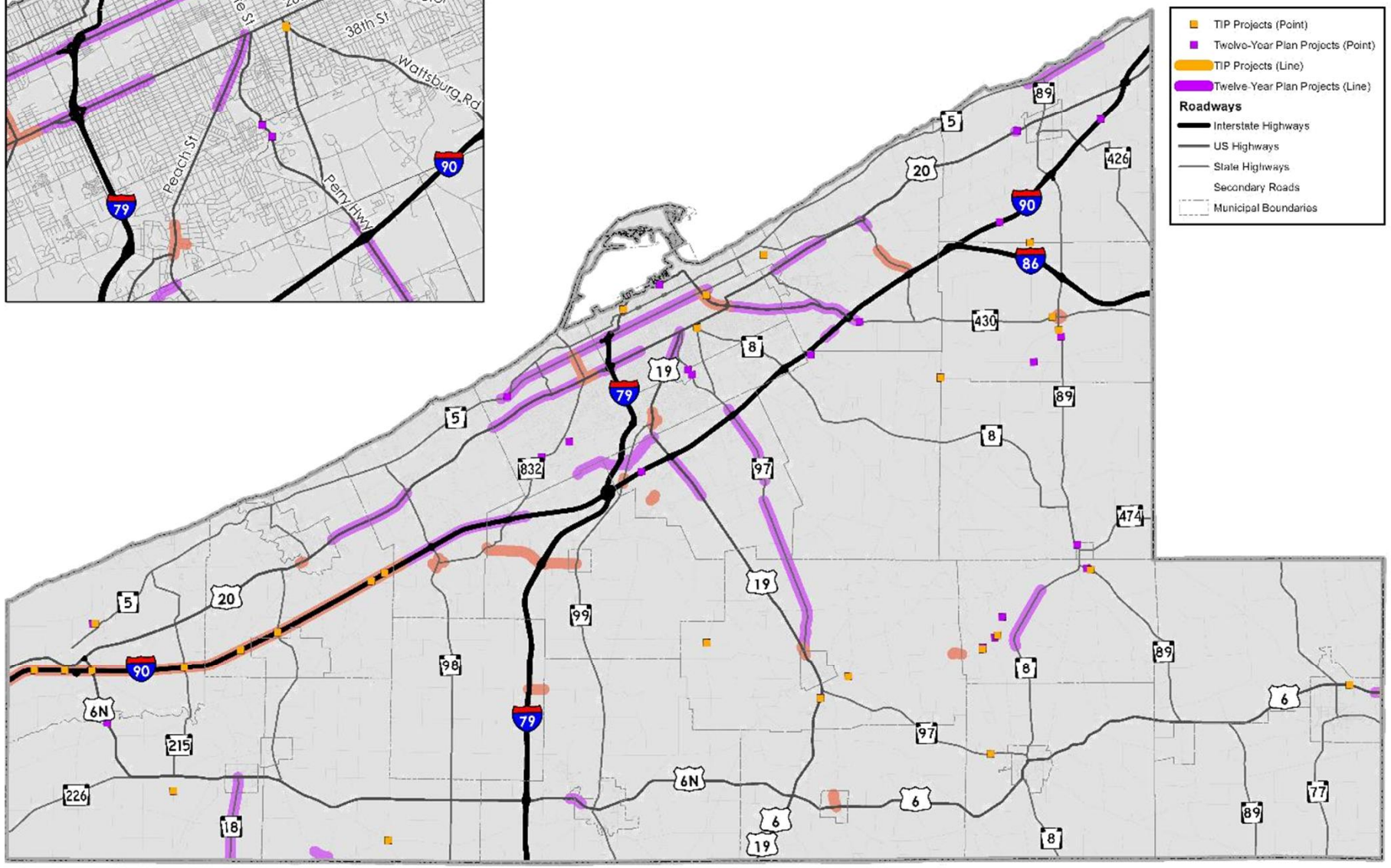


Hazardous Waste Sites



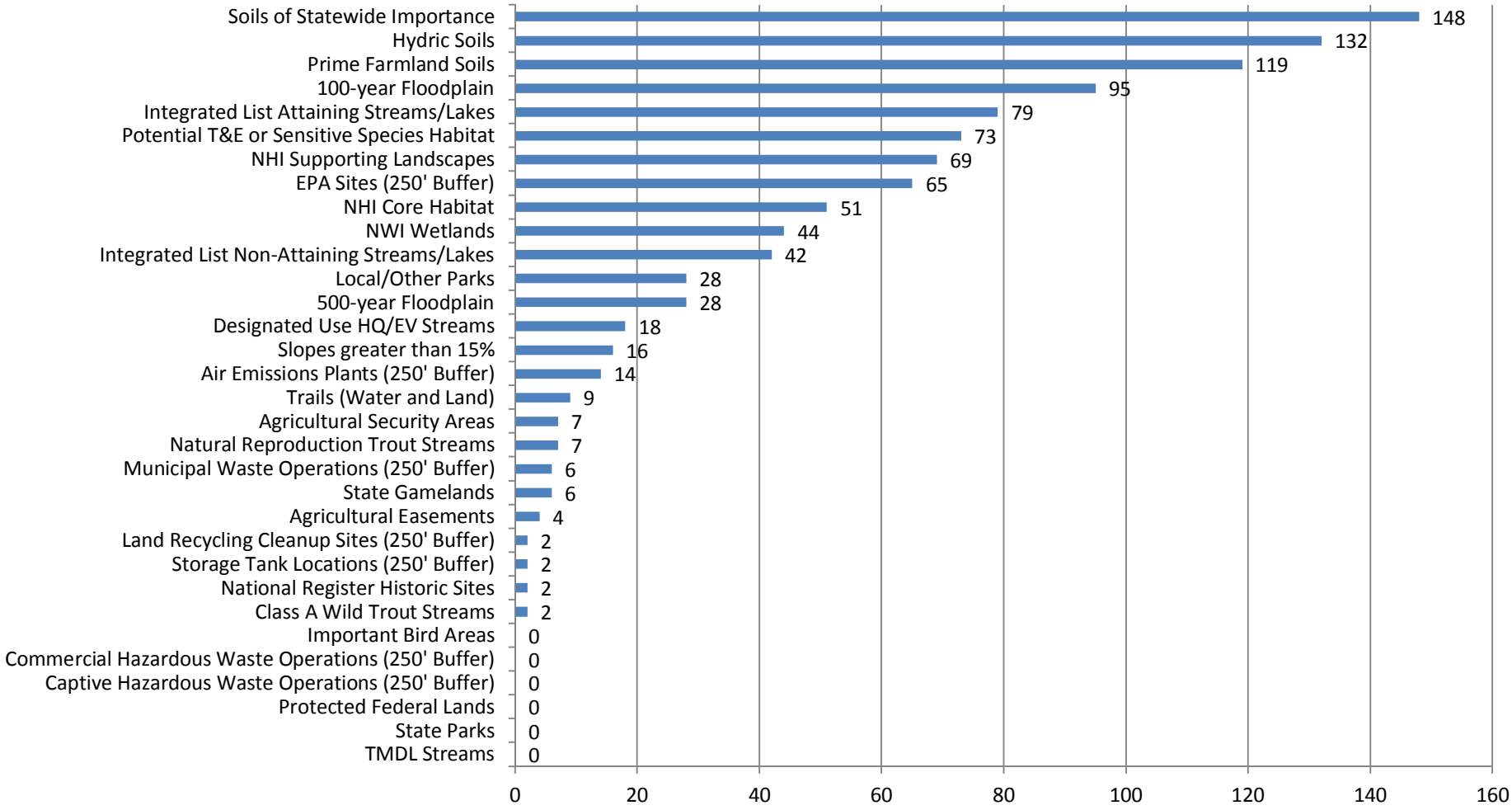
Erie TIP + TYP Project Locations



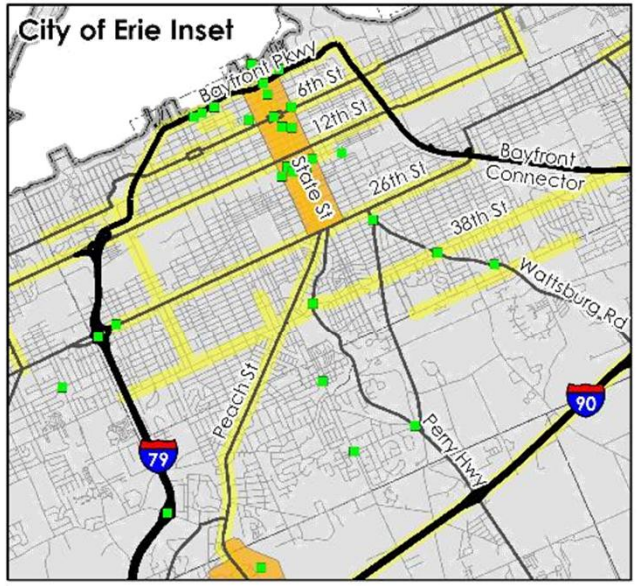


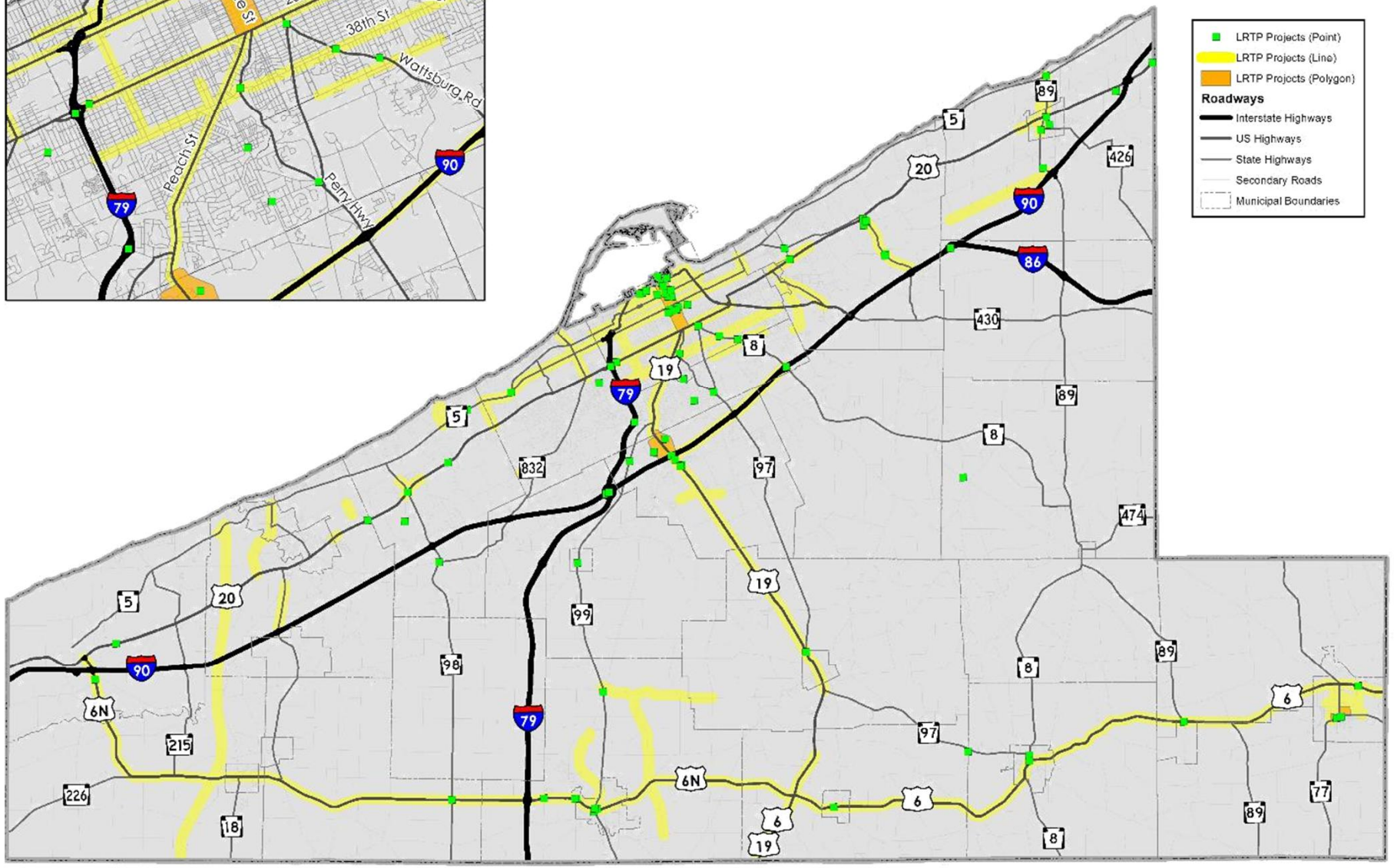
TIP + TYP – Short Term Impacts

TIP + TYP Projects Impacting Resources



Erie 2017 LRTP Project Locations

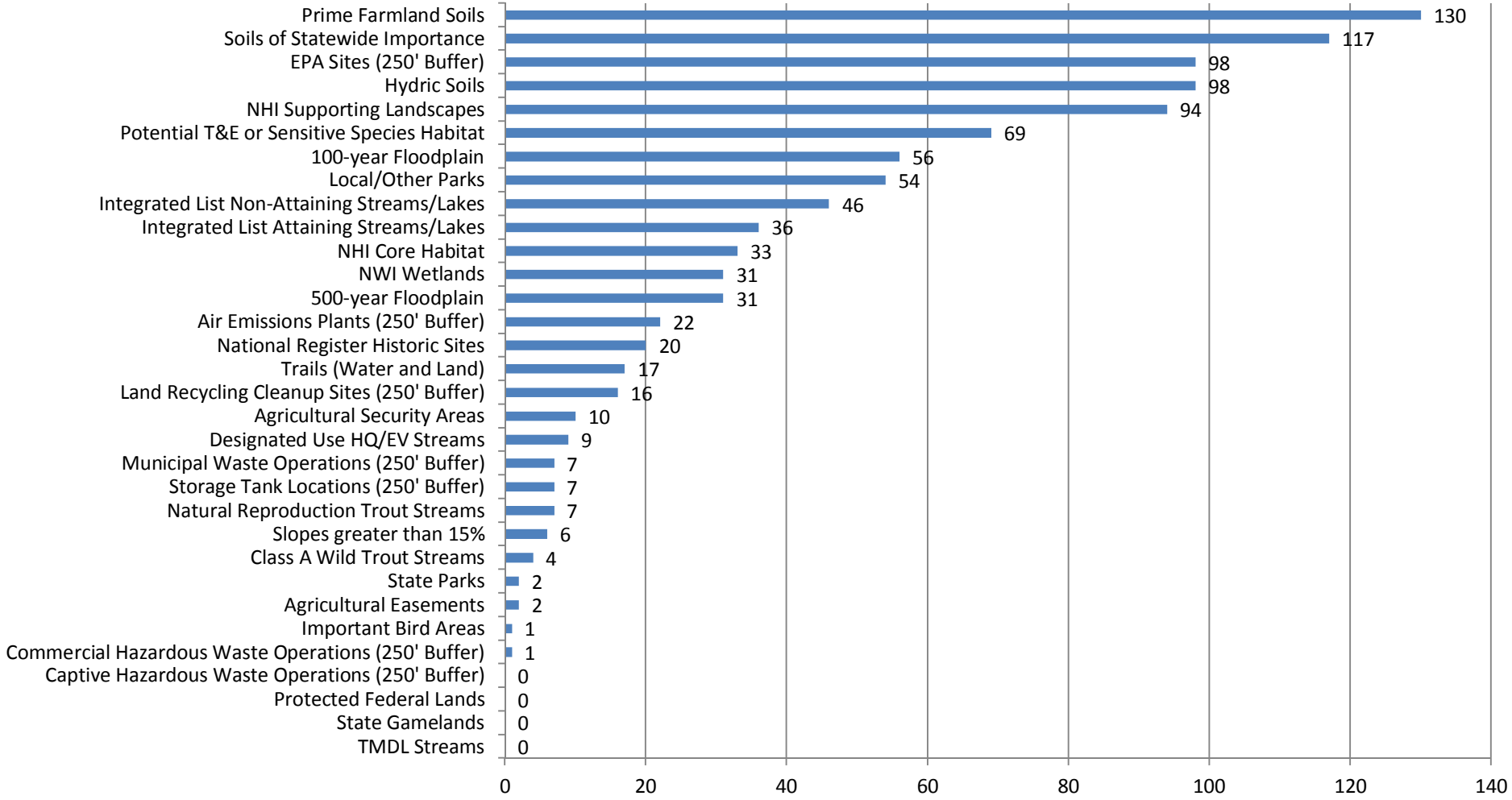




Kathy Wyrosdick, Erie County Planning | Dan Keane, PennDOT Central Office | Ashley Tracy, WRA

LRTP - Long Term Impacts

LRTP Projects Impacting Resources



Environmental Impact Mitigation

LRTP Mitigation Strategies

- Utilizing the Linking Planning & NEPA (LPN) system to identify potential impacts early in the process
- Continually updating GIS environmental layers with the most recently available data
- **Wetland** bank for the Lake Erie Watershed and the French Creek/Allegheny Watershed with capacity
  - No need at this time to pursue more banking sites
- Continual contact and coordination with resource agencies on all projects

Source: USFWS Wetlands of Pennsylvania's Lake Erie Watershed

Environmental Impact Mitigation

LRTP Mitigation Strategies

- Tracking threatened/endangered species
  - Indiana bat, Northern Long-Eared bat, Bald Eagle, many species of fish and plants
  - Lake Erie Tributaries are home to migratory fish. These waters carry an instream restriction which can impact construction schedules. Same is true for trout stocked and wild trout streams.
  - Mussel Programmatic Agreement with USFWS and PFBC
  - T&E Mussels in French Creek and its tributaries

Clockwise from top: Bald Eagle, Variegated Horsetail Evergreen, Northern Riffleshell, Lake Sturgeon, Northern Long-Eared Bat

Environmental Impact Mitigation

Potentially Impacted T&E Species

Scientific Name	Common Name	Current Status
Acipenser fulvescens	Lake Sturgeon	Endangered
Carex retrorsa	Backward Sedge	Endangered
Chaenobryttus gulosus	Warmouth	Endangered
Coregonus artedi	Cisco	Endangered
Eleocharis elliptica	Slender Spike-rush	Endangered
Epilobium strictum	Downy Willow-herb	Endangered
Equisetum variegatum	Variegated Horsetail Evergreen	Endangered
Etheostoma exile	Iowa Darter	Endangered
Etheostoma pellucida	Eastern Sand Darter	Endangered
Ichthyomyzon fossor	Northern Brook Lamprey	Endangered
Lepisosteus oculatus	Spotted Gar	Endangered
Noturus gyrinus	Tadpole Madtom	Endangered
Noturus stigmosus	Northern Madtom	Endangered
Parnassia glauca	Carolina Grass-ofparnassus	Endangered
Schoenoplectus acutus	Hard-stemmed Bulrush	Endangered
Sorbus decora	Showy Mountain-ash	Endangered
Myotis septentrionalis	Northern Long-Eared Bat	Threatened
Juncus alpinoarticulatus ssp. Nodulo	Richardson's Rush	Threatened
Juncus arcticus var. littoralis	Baltic Rush	Threatened
Juncus brachycephalus	Small-headed Rush	Threatened
Linnaea borealis	Twinflower	Threatened
Potamogeton richardsonii	Red-head Pondweed	Threatened
Ribes triste	Red Currant	Threatened

Environmental Impact Mitigation

Multimodal Connectivity
Source: PennDOT D1 Report Card

Stormwater Systems
Source: PennDOT Pub 13M

LRTP Mitigation Strategies

- Rapid Bridge Replacement Program
  - Minimizes the extent of impacts on natural resources
- Multi-modal Connectivity
  - Provide connectivity to river trails
  - Incorporation of wayfinding signs along rivers under bridges
  - Provide more access points at bridges to water trails and angling
- Erosion control on construction sites
- Maintaining existing stormwater systems
  - City of Erie is an MS4 reporting area to EPA
  - Millcreek Township has an ACT 167 Plan that requires reduction in stormwater
- Preserving open space in floodplains
- Minimizing impact of climate change by meeting EPA emissions budgets through the travel demand forecasting and air quality conformity process

Environmental Impact Mitigation

LRTP Mitigation Strategies

- Working with PHMC to identify and preserve all key cultural and historic resources in the Erie County region, and if needed, to identify and implement advanced mitigation strategies
- Walnut Creek is an Impaired and Priority Watershed – ensure early coordination on projects in the vicinity to mitigate potential impacts
- Lake Erie Coastal Zone regulated by NOAA and DEP
- Coordinating with PA State Historic Preservation Office for historic districts, historic structures and archaeological sites
- Avoiding impacts to public parks and State Gamelands
- Avoiding impacts to potential hazardous waste site (i.e. old gas stations)
- Allowing for public involvement in project development

Thank You

Questions or comments?

LPN #	MPMS#	Proposal Title	Agency Coordination	2.5.1.a - Class A, Wild Trout Streams	2.5.1.a - Stream Sections that Support Wild Trout Production	2.5.1.a - Wilderness Trout Streams	2.5.1.a – Chapter 93 Existing Use wild or stocked trout streams	2.5.1.b - Streams Chapter 93 HQ/EV Designated Use	2.5.1.b – Chapter 93 Existing Use High Quality / EV Streams	2.5.1.c - Hydric soils	2.5.1.c - National Wetlands Inventory for Pennsylvania - polygon	2.5.1.e - Potential for effects to Archaeological Resources	2.5.1.e – Test for high probability of an archeological site within 100 feet of the proposal	2.5.1.e – Test for medium probability of an archeological site within 100 feet of the proposal	2.5.1.e, 2.5.1.g - Potential for effects to Historic Properties	2.5.1.g - Boundaries of State Parks in Pennsylvania	2.5.1.g - DCNR - State Forest Lands	2.5.1.g - Protected Lands Inventory: Federal Lands	2.5.1.g - State Game Lands	2.5.1.g - Statewide Trails information from DCNR	2.5.1.h - PA Water Trails	2.5.1.i - Captive Hazardous Waste Operations	2.5.1.i - Commercial Hazardous Waste Operations	2.5.1.i - EPA GeoSpatial Data	2.5.1.i - Land Recycling Cleanup Locations	2.5.1.i - Municipal Waste Operations	2.5.1.i - Storage Tank Locations	2.5.1.j - **For all bridge projects with a regulated floodplain within 100 yards, the impact automatically	2.5.1.j - 100-year floodplains (special flood hazard area)	2.5.1.k - Agricultural Easements	2.5.1.k - Prime farmland soils and soils of statewide importance	2.5.1.l - Navigable waters as determined by the U.S. Army Corps of Engineers	2.5.1.m - Property boundaries for lands acquired with LWCF money	2.5.1.m - point layer for development projects (e.g., playground equipment in a park) that use	2.5.1.n - FEMA / PEMA Unified Hazard Mitigation Assistance Program Properties	2.7.5 - Proposal in Act 167 Watershed	Total
LPN000342	58229	SR 4012 Br over I-79	No Impacts	0	0	0	0	0	0	9	4	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	10	33
LPN000437	833	Elmwood Rd Br T-324	No Impacts	0	0	0	0	0	0	9	10	4			8	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	10	61
LPN001209	95558	SR 4012: Intrchng Rd Impr	PGC	0	0	0	0	0	0	9	10	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	10	39
LPN001798	96310	PA 5: Pgh to Greengarden	DCNR, PGC	0	0	0	0	0	0	9	1	4			10	0	0	0	0	0	0	0	1	10	2	8	1	0	0	0	10	0	0	0	0	10	66
LPN003146	89219	PA 290: The Bayfront	No Impacts	0	0	0	0	0	0	9	10	7			10	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	10	0	0	0	0	10	64
LPN003553	102075	PA 699 & Hershey Road	PGC	0	0	0	0	0	0	9	1	0			10	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	10	0	0	0	0	10	50
LPN004048	88462	SR 2006 over French Creek	FBC, USFWS, PGC	0	0	0	0	0	0	9	10	0			0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	33
LPN005298	72613	PA 197 Bridge/French Ck Trib	No Impacts	0	0	0	0	0	0	9	1	0			2	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	10	0	0	0	0	0	26
LPN005624	600	US 19 over LeBoeuf Creek	FBC, USFWS, DCNR	10	10	0	0	10	0	7	8	7			8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	70
LPN005625	1271	US 20 Bridge over Elk Creek	No Impacts	0	0	0	0	0	0	9	1	4			4	0	0	0	0	0	0	0	0	4	1	1	0	0	0	0	10	0	0	0	0	10	44
LPN005626	93620	SR 1006/12 Mile Ck Brnch	No Impacts	0	0	0	0	10	0	9	0	0			2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	10	41
LPN005713	99010	US 19: Circuit St to Moore Rd	No Impacts	0	0	0	0	0	0	9	10	0			0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	10	0	0	0	0	0	39
LPN005714	99762	US 19 thru Waterford Boro	No Impacts	0	0	0	0	10	0	9	10	10			10	0	0	0	0	0	0	0	0	10	10	0	0	0	0	0	10	0	0	0	0	0	79
LPN005960	99000	SR 290:Bayfront Connector	PGC	0	0	0	0	0	0	9	10	7			10	0	0	0	0	0	0	0	0	10	4	10	1	0	0	0	10	0	0	0	0	10	81
LPN005968	99020	SR 4016: Old French Rd to Rice Ave	PGC	0	0	0	0	0	0	9	8	0			10	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	10	0	0	0	0	10	57
LPN005991	105776	PA 98/Sterrettania Rd Intersection	PGC	0	0	0	0	0	0	9	0	0			8	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	10	0	0	0	0	10	47
LPN005992	102069	Hamot Rd/Oliver Rd Intersection	PGC	0	0	0	0	0	0	9	0	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	10	29
LPN006448	85372	Pinetree Rd T-585 Bridge	No Impacts	0	0	0	0	10	0	9	2	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	10	41
LPN006462	106446	SR 89 & SR 430 Intersection	PGC	0	0	0	0	0	0	9	0	0			0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	10	0	0	0	0	0	29
LPN007295	106444	Pine Ave/Old French Rd/28th St Intersection	PGC	0	0	0	0	0	0	9	0	0	0	5	8	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	10	0	0	0	0	10	52
LPN007303	106766	SR 20 & SR 832 ADA Ramps	PGC	0	0	0	0	0	0	9	4	0	9	5	10	0	0	0	0	0	0	0	0	10	1	0	0	0	0	0	10	0	0	0	0	10	68
LPN007506	1180	Niemeyer Road (T-463) Br	USFWS, FBC	0	0	0	0	0	0	9	10	0	0	0	10	0	0	0	0	0	0	0	0	0	0	1	0	10	10	0	10	0	0	0	0	0	60
LPN007548	106865	Caughey Road ADA Ramps	PGC	0	0	0	0	0	0	9	8	0	0	5	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	10	0	0	0	0	10	52
LPN007507	58232	McBride Viaduct	PGC	0	0	0	0	0	0	0	0	0	0	5	8	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	10	0	0	0	0	10	37
LPN007508	853	Kane Hill Road Br T-609	No Impacts	0	0	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	1	1	1	0	10	10	0	10	0	0	0	0	10	46
LPN007509	99057	PA 5: Gorman-Brewster	PGC, DCNR	0	0	0	0	0	0	9	10	4	9	5	10	0	0	0	0	10	0	0	1	10	10	10	10	0	10	0	10	0	0	0	0	10	128
LPN007549	99703	SR 5: Lake Road	PGC, FBC, DCNR	0	0	0	0	0	0	9	8	0	9	5	0	0	0	0	0	10	0	0	0	4	0	0	0	0	0	10	10	0	0	0	0	10	75
LPN007550	90286	PA 5: West 12th Street	PGC, DCNR	0	0	0	0	0	0	9	0	4	9	5	10	0	0	0	0	0	0	0	0	10	1	10	1	0	0	0	10	0	0	0	0	10	79
LPN007551	97170	SR 5 Brdg/Wensel Run	FBC	0	0	0	0	0	0	9	0	4	9	5	0	0	0	0	0	10	0	0	0	1	0	0	0	10	0	0	10	0	0	0	0	10	68
LPN007552	88605	SR 6 over Keppels Run	No Impacts	0	0	0	0	0	0	9	0	0	9	5	1	0	0	0	0	0	0	0	0	10	0	0	1	10	0	0	10	0	0	0	0	0	55
LPN007553	99049	PA 8: Bldwin-N. of Casier	FBC, USFWS, DCNR	0	0	0	0	0	0	7	8	0	9	5	8	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	49
LPN007554	97215	SR 8 Brdg/Fr. Ck. W. Brch	FBC,USFWS	0	0	0	0	0	0	9	8	0	9	5	0	0	0	0	0	0	0	0	0	10	0	0	0	10	10	0	10	0	0	0	0	0	71
LPN007555	99701	SR 18: Crawford Co- US 6N	PGC, FBC	0	0	0	0	0	0	9	1	0	9	5	10	0	0	0	0	0	0	0	0	10	0	1	0	0	10	0	10	0	0	0	0	0	65
LPN007556	98333	SR 19: 38th St to 26th St	PGC	0	0	0	0	0	0	9	0	0	0	5	4	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	10	0	0	0	0	10	48
LPN007557	97888	Peach Street Turning Lane	PGC	0	0	0	0	0	0	7	1	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	10	0	0	0	0	10	38
LPN007558	98308	SR 19: Dorn Rd-Robinson	PGC	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	10	0	0	0	0	10	33
LPN007559	91394	N Waterford Improvements	FBC ,DCNR, PGC	0	0	0	0	0	0	9	1	0	9	5	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	10	0	0	0	0	0	38
LPN007560	99059	US 20: Millfair - Brown	PGC	0	0	0	0	0	0	9	0	0	0	5	2	0	0	0	0	0	0	0	0	10	0	8	0	0	0	0	10	0	0	0	0	10	54
LPN007561	99015	US 20: H2O St-Walbridge	PGC	0	0	0	0	0	0	3	2	0	9	5	10	0	0	0	0	0	0	0	0	8	0	2	0	0	0	0	10	0	0	0	0	10	59
LPN007562	99707	SR 20: Imperial Pt-SR 98	PGC	0	0	0	0	0	0	5	8	4	9	5	8	0	0	0	0	0	0	0	0	10	10	0	0	0	0	0	10	0	0	0	0	10	79
LPN007563	88472	SR 20 over Trout Run	No Impacts	0	0	0	0	0	0	7	10	0	9	5	8	0	0	0	0	0	0	0	0	10	1	0	0	10	10	0	10	0	0	0	0	10	90
LPN007564	1172	US 20 over CN RR	PGC, DCNR	0	0	0	0	0	0	5	8	0	9	5	10	0	0	0	0	0	0	0	0	2	0	0	0	0	0	4	10	0	0	0	0	10	63
LPN007565	97205	SR 20 Brdg/16 Mile Creek	No Impacts	0	0	0	0	0	0	9	4	0	0	5	2	0	0	0	0	0	0	0	0	10	0	0	0	10	0	1	10	0	0	0	0	10	61
LPN007571	95613	Erie Preserve Br Group (15843BRKY)	No Impacts	0	10	0	0	0	0	9	10	0	0	0	4	0	0	0	0	0	0	0	0	1	0	0	0	10	10	0	10	0	0	0	0	0	64
LPN007572	95613	16000 BRKY	FBC	0	0	0	0	0	0	9	1	0	0	5	8	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	43
LPN007573	95613	16006 BRKY	No Impacts	0	0	0	0	0	0	9	2	0	9	5	4	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	49
LPN007574	95613	16173 BRKY	No Impacts	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	10	0	0	10	0	0	0	0	0	39
LPN007575	95613	16397 BRKY	No Impacts	0	0	0	0	0	0	3	0	0	0	5	10	0	0	0	0	0	0	0	0	4	4	0	1	10	10	0	10	0	0	0	0	10	67
LPN007576	622	SR 97: French Ck Brdg	FBC, USFWS	0	0	0	0	0	0	9	10	4	9	5	0	0	0	0	0	0	10	0	0	0	0	0	0	10	10	0	10	0	0	0	0	0	77
LPN007577	99007	PA 197: H2Ofrd-Robinson	FBC, DCNR,USFWS	0	0	0	0	0	0	9	10	0	9	5	10	0	0	0	0	0	0	0	0	1	0	0	0	0	10	0	10	0	0	0	0	0	64
LPN007578	99706	SR 197: SR 8 to SR 19	PGC, FBC, USFWS	0	0	0	0	0	0	9	10	0	9	5	10	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	10	0	0	0	0	0	63
LPN007579	101502	SR 197 & I-90 Interchange	PGC	0	0	0	0	0	0	9	4	0	9	5	1	0	0	0	0	0	0	0	0	10	0	10	0	0	10	0	10	0	0	0	0	10	78
LPN007580	99056	PA 290 & 12th St Signals	PGC	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	10	0	0	0	0	10	37
LPN007581	104463	PA 290/Buffalo Road Int	PGC	0	0	0	0	0	0	9	8	7	9	5	10	0	0	0	0	0	0	0	0	10	0	10	0	0	0	0	10	0	0	0	0	10	88
LPN007582	97125	SR 430 Brdg/Mitchell Run	No Impacts	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	10	0	0	0	0	10	33
LPN007583	97213	SR 505 Brdg/Mill Ck #2	No Impacts	0	0	0	0	0	0	1	0	0	0	0	10	0	0	0	0	0	0	0	0	1	0	0	4	10	0	0	10	0	0	0	0	10	46
LPN007584	97214	SR 505 Brdg/Mill Creek #1	No Impacts	0	0	0	0	0	0	9	0	0	0	0	8	0	0	0	0	0	0	0	0	4	0	0	4	10	0	0	10	0	0	0	0	10	55
LPN007585	102468	PA 531: Depot Road, Section 2	No Impacts	0	0	0	0	0	0	9	4	0	9	5	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	1	10	0	0	0	0	10	52
LPN007586	106586	SR 531: Depot Road, Section 4	No Impacts	0	0	0	0	0	0	9	0	0	0	5	10	0	0	0	0	0	0	0	0	10	1	0	0	0	0	0	10	0	0	0	0	10	55
LPN007587	47505	PA 699: Ednbro Rd/I-90 Br	No Impacts	0	0	0	0	4	0	9	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	7	0	0	0	0	10	33
LPN007588	97150	SR 1001 Brdg/Fr Ck N Brch	FBC,USFWS	0	0	0	0	0	0	9	1	7	9	5	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	0	10	0	0	0	0	0	61
LPN007590	97222	SR 1004 Brdg/Townley Run	No Impacts	0	0	0	0	0	0	9	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	10	0	1	10	0	0	0	0	0	38
LPN007591	47508	Moorheadville Rd Br/I-90	No Impacts	0	0	0	0	0	0	9	0	0	0	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	10	36
LPN007592	97221	SR 1013 Bridge/I-90	No Impacts	0	0	0	0	0	0	9	8	0	9	5	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	10	0	0	0	0	10	53
LPN007593	1280	Remington Rd/I-90	No Impacts	0	0	0	0	0	0	7	1	0	9	5	0	0	0	0	0	0	0	0	0	1	0	0	0	10	0	1	10	0	0	0	0	10	54
LPN007594	106443	Erie 2019 Bridge Shotcrete Group (BRKY 16212)	No Impacts	0	0	0	0	0	0	3	2	0	9	5	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	0	10	49
LPN007595	106443	Erie 2019 Bridge Shotcrete Group (BRKY 16237)	FBC,USFWS	0	0	0	0	0	0	9	4	0	9	5	0	0	0	0	8	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	55
LPN007596	106443	Erie 2019 Bridge Shotcrete Group (BRKY 16238)	FBC	0	0	0	0	0	0	5	0	0	9	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	29
LPN007597	106443	Erie 2019 Bridge Shotcrete Group (BRKY 16313)	FBC	0	0	0	0	0	0	9	4	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	38
LPN007598	106443	Erie 2019 Bridge Shotcrete Group (BRKY 16353)	No Impacts	0	0	0	0	10	0	9	10	0	0	5	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	10	0	0	0	0	0	52
LPN007599	98338	US 6N & Angling Road	DCNR	0	0	0	0	0	0	1	10	4	0	5	8	0	0	0	0	0	0	0	0	10	0	0	0	0	10	0	10	0	0	0	0	0	58
LPN007600	97241	SR 3006 Brdg/Conneaut Ck	DCNR, FBC	0	0	0	0	0	0	3	4	4	0	5	10	0	0	0	0	0	0	0	0	0	0	0	0	10	10	0	10	0	0	0	0	0	56
LPN007601	97126	SR 3010 Br/Cssg Ck W Brch	No Impacts	0	0	0	0	0	0	9	4	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	43
LPN007602	88463	SR 3014 over I-79	No Impacts	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	10	0	0	0	0	10	33
LPN007603	88474	SR 3017 over Temple Creek	No Impacts	0	0	0	0	0	0	9	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	33
LPN007604	98999	West Rd: PA 832 to PA 99	No Impacts	0	0	0	0	0	0	9	0	0	0	5	4	0	0	0	0	0	0	0	0	10	0	0	0	0	10	0	10	0	0	0	0	10	58
LPN007605	97226	SR 3020 Brdg over Elk Ck	No Impacts	0	0	0	0	0	0	9	4	0	0	0	8	0	0	0	0	0	0	0	0	4	0	0	0	10	10	0	10	0	0	0	0	10	65
LPN007606	98322	SR 4010:Hershey Rd-SR 99	No Impacts	0	0	0	0	0	0	9	0	0	0	5	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	10	0	0	0	0	10	44
LPN007607	97243	SR 4011 Brdg/Walnut Ck	DCNR	0	0	0	0	0	0	9	0	0	0	5	10	0	0	0	0	0	0	0	0	2	0	0	0	10	10	0	10	0	0	0	0	10	66
LPN007608	88716	Millfair Road Project	No Impacts	0	0	0	0	0	0	9	8	0	0	5	2	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	10	0	0	0	0	10	54
LPN007609	104338	Cranberry Area Ped Improv	PGC,DCNR, FBC	0	0	0	0	0	0	0	10	0	9	5	10	0	0	0	0	10	0	0	0	10	0	0	0	0	0	0	10	0	0	0	0	10	74
LPN007610	97171	SR 4105 Bridge over I-90	No Impacts	0	0	0	0	0	0	7	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	10	0	0	0	0	10	29
LPN007611	47501	SR 4108: Jordan Rd/I-90	No Impacts	0	0	0	0	0	0	7	2	0	0	5	2	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	10	0	0	0	0	10	39
				10	20	0	0	54	0	643	323	85	252	235	376	0	0	0	24	40	10	0	2	422	50	73	23	260	170	18	827	0	0	0	0	540	
			# OF PROJECTS AFFECTED BY RESOURCE:	1	2	0	0	6	0	81	56	16	28	47	52	0	0	0	4	4	1	0	2	60	13	13	8	26	17	6	83	0	0	0	0	54	

Appendix G
Report Card

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Appendix G - Report Card

Goal Area	Measure	Description	Data Sources	Frequency of Data Update	Baseline Data (2016)	Current (2017-2022)		Mid-Term (2023-2028)		Long-Term (2029-2042)	
						Trend Goal	Result	Trend Goal	Result	Trend Goal	Result
1 - Economic Vitality	Studies	Economic development, land use studies completed	MPO	Every 2 years the UPWP is updated		✓		✓		✓	
	Tourism	Was accessibility addressed for projects near key tourist destinations?	MPO; Tourist Destinations; VisitErie	Every TIP Update		✓		✓		✓	
2 - Safety & Security	Safety	Safety improvement projects implemented	MPMS Data Extract	Every TIP Update		✓		✓		✓	
		Total crash rate, fatality, or serious injury accidents reduced where safety enhancements were made	PennDOT - crash data; or USDOT Indicators	5 years of post-implementation data				✓		✓	
	School Zone	Projects constructed to improve school zone safety enhanced through upgraded crosswalks, signing, sidewalks	PennDOT	Every 2 year grant period		✓		✓		✓	
	Railroad	At-grade rail crossings upgraded or eliminated	PennDOT; TIP Funding; Municipalities;	Every TIP Update		✓		✓		✓	
	Security	Intersections along emergency detour routes improved	PennDOT; EMA; reference against emergency detour route map	Every TIP Update		✓		✓		✓	
		Under-clearance bridges fixed	GIS	Every TIP Update		⇧		⇧		⇧	
3 - Multimodal Accessibility & Mobility	Sidewalks and Trails	Complete greenways and countywide pedestrian and bicycle plan to prioritize trails and pedestrian and bicycle projects	MPO; PennDOT; Bicycle and pedestrian groups	Once		✓					
		An increase in mode share for non-motorized (walk or bicycle) trips	American Community Survey; USDOT Site	Every 5 years	Bicycle 0.3% Walk 3.7%	⇧		⇧		⇧	
		Have municipalities adopted a Complete Streets policy?	MPO	Once		✓					
		# of betterments identified through LRTP completed including widening, bicycle lane striping, transit pull offs, or sidewalks	MPO, Municipality, or PennDOT knowledge on projects	Every TIP Update		⇧		⇧		⇧	
	Transit	Transit system route/schedule update implemented and serving residents, employers, Millcreek Mall, Presque Isle	EMTA	Once		✓					
		An increase in mode share for transit trips	American Community Survey; USDOT Site	Every 5 years	Transit 1.5%						
4 - Freight Accessibility & Mobility	Freight Accessibility	Freight committee established	MPO; Freight stakeholders; PennDOT	Once		✓					
5 - Sustainability	Environmental Justice	Were goals and areas of EJ concern addressed for projects during local outreach following PennDOT Connects policy?	MPO; PennDOT; EJ Groups	Every TIP Update		⇧		⇧		⇧	
	Environmental Impacts	Were goals and areas of environmental concern addressed for projects during local outreach following PennDOT Connects policy?	MPO; PennDOT	Every TIP Update		⇧		⇧		⇧	
	Public Access	Were any new public access points to water trails or streams added to highway or bridge projects where feasible	MPO; PennDOT; PFBC;	Every TIP Update		✓		✓		✓	
6 - Project Feasibility	Project Delivery	Number of LRTP recommended projects in-progress or completed	MPO; PennDOT	Every TIP Update		⇧		⇧		⇧	
	Public Outreach	Were goals and areas of concern addressed for projects during local outreach following PennDOT Connects policy?	MPO	Every TIP Update		✓					
	Studies	Studies prioritized through UPWP referencing the LRTP and prioritizing studies to be completed in the UPWP	MPO	Every 2 years the UPWP is updated		✓					
7 - Congestion & Maintenance	Bridges	State-Owned Bridges that are structurally deficient	PennDOT; District 1 Report Card	Annually	4.3% (25 of 577)	⇩		⇩		⇩	
		Locally-Owned Bridges that are structurally deficient	PennDOT; District 1 Report Card	Annually	37.2% (44 of 118)	⇩		⇩		⇩	
		Local bridges **prioritized** for rehabilitation / replacement / removal with coordination between PennDOT and MPO	PennDOT; Erie MPO	Once - kicked off and established, then on 2-year cycle		✓					
	Pavement Quality	International Roughness Index (IRI) Overall maintained or improved	PennDOT; District 1 Report Card	Annually	107	⇩		⇩		⇩	
		International Roughness Index (IRI) Interstates maintained or improved	PennDOT; District 1 Report Card	Annually	58	⇩		⇩		⇩	
	Congestion / Traffic Signals	# Signals Applied for GLG Funding	PennDOT; Funding Applications	Every TIP Update		⇧		⇧		⇧	
		Update the Congestion Mitigation Plan (CMP) in the current term	PennDOT; Funding Applications	Once in current term, then every 10 years		✓					
	Stormwater	Update the Act 167 Plan every 10 years and has stormwater been accounted for early in project phases	MPO; Municipalities	Every 10 years		✓				✓